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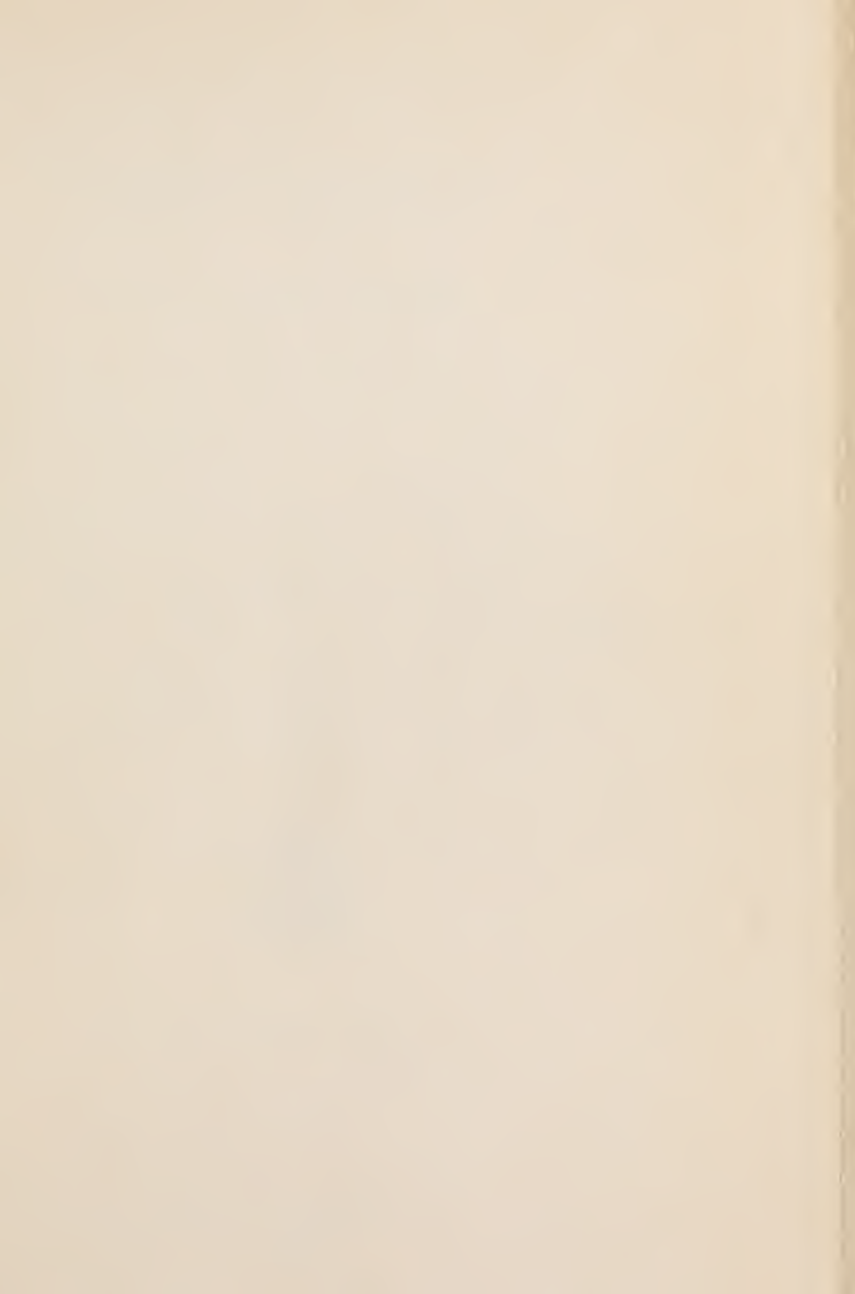


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DEPARTMENT OF WATER RESOURCES
—
TWENTY-NINTH BIENNIAL REPORT
OF THE
STATE ENGINEER
TO THE
GOVERNOR OF COLORADO
FOR THE YEARS
1937-1938



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M. C. HINDERLIDER

State Engineer

DEPARTMENT
OF
WATER RESOURCES

Twenty-ninth Biennial
Report

OF THE

STATE ENGINEER

TO THE

Governor of Colorado



For the Years 1937-1938

M. C. HINDERLIDER
State Engineer

BRADFORD-ROBINSON PRINTING CO.
DENVER, COLORADO
1939

LETTER OF TRANSMITTAL

Sir:

In compliance with provisions of law, I have the honor to transmit herewith the Twenty-ninth Biennial Report of the activities of the Department of Water Resources for the years 1937 and 1938.

Very respectfully,

M. C. HINDERLIDER,
State Engineer.

To His Excellency,
TELLER AMMONS,
Governor.

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LIST OF OFFICERS AND EMPLOYEES

State Engineering Department

M. C. Hinderlider.....	State Engineer
C. C. Hezmalhaleh.....	Deputy State Engineer
L. T. Burgess.....	Chief Hydrographer
W. T. Blight.....	Chief Clerk and Draftsman
Edith Plunkett.....	Secretary and Stenographer
Jessie James.....	Stenographer
C. E. Schnurr.....	Hydrographer, Div. 1
Wm. E. Wagner.....	Hydrographer, Div. 1
F. C. Snyder.....	Hydrographer, Div. 2
W. W. Wheeler.....	Hydrographer, Div. 2
D. S. Jones, Jr.....	Hydrographer, Div. 3

IRRIGATION DIVISION ENGINEERS

Div. No. 1—J. E. Whitten, Special Deputy.....	Denver
Div. No. 2—C. W. Beach.....	Pueblo
Div. No. 3—W. D. Carroll.....	Alamosa
Div. No. 4—F. S. Hotchkiss.....	Montrose
Div. No. 5—L. C. Finley.....	Glenwood Springs
Div. No. 6—B. T. Chase.....	Steamboat Springs
Div. No. 7—J. R. Williams.....	Durango

WATER COMMISSIONERS

Div. Dist.

No. No.

1	1	J. L. Samples.....	Ft. Morgan
1	2	Stewart V. Wallace.....	Ft. Lupton
1	3	W. J. McAnelly.....	Ft. Collins
1	4	Geo. S. Kral.....	Loveland
1	5	C. J. Maier.....	Longmont
1	6	T. L. Platt, 2236 Mapleton Ave.....	Boulder
1	7	A. E. Jones.....	Golden
1	8	C. M. Hall, 3490 So. Broadway.....	Englewood
1	9	J. W. Van Gorden.....	Morrison
2	10	J. M. Pribble, 1020 N. Wahsatch.....	Colorado Springs
2	11	J. A. Burnett.....	Poncha Springs
2	12	D. S. Jones.....	Canon City
2	13	H. W. Hendershot.....	Westcliffe
2	14	Joseph Russ.....	Pueblo
2	15	John Simonson.....	Beulah
2	16	H. W. Craig.....	La Veta
2	17	S. W. Cressy.....	Rocky Ford
2	18	Juan A. Mestas.....	Aguilar
2	19	H. B. Bostick.....	Trinidad
3	20	Thomas Carr.....	Del Norte
3	21	T. M. Orman.....	La Jara
3	22	L. W. Sowards.....	Manassa
1-2	23	J. Desserich.....	Hartsel
3	24	Fares Gold.....	San Luis
3	25	John L. Charles.....	Crestone
3	26	Ira Colvin.....	Saguache
3	27	Jas. Medina.....	La Garita
4	28	J. Roy Hicks.....	Sargents
7	29	Joe T. Chambers, Com. at Large '34.....	Pagosa Springs
7	30	George H. Tyner.....	Falfa
7	31	Albert Larsen.....	Tiffany
7	32	No Commissioner.....	
7	33	Edward C. Kennedy.....	Breen

1-20-39

WATER COMMISSIONERS (Continued)

Div.	Dist.	
No.	No.	
7	34	Hugo Weston .....Cortez
3	35	George Opincar .....Blanca
5	36	No Commissioner
5	37	B. F. Long.....Eagle
5	38	P. K. Barthel .....Carbondale
5	39	Chas. E. Rauman.....Rifle
4	40	R. E. Robinson.....Cedaredge
4	41	Dexter B. Walker.....Montrose
4	42	George M. Saunders .....Mesa
6	43	Thos. Watkins .....Meeker
6	44	Edw. A. Harrison.....Craig
5	45	Frank Taughenbaugh .....Rifle
1	47	Clarence Boston .....Walden
1	48	R. A. Mosier.....Jelm, Wyoming
2	49	No Commissioner.....
5	50	No Commissioner.....
5	51	P. S. Elting.....Sulphur Springs
5	52	Carl Forster .....Radium
5	53	Chas. Plasters .....Gypsum
6	54	Frank D. Baxter.....Slater
6	55	No Commissioner.....
6	56	No Commissioner.....
6	57	A. R. Goree.....Hayden
6	58	Wilbur Rule.....Steamboat Springs
4	59	Leon H. Dutemeyer (Com. at Large).....Gunnison
4	60	N. J. Clark .....Redvale
4	61	Ralph G. Stocks .....Paradox
4	62	Leon H. Dutemeyer (Com. at Large).....Gunnison
4	63	No Commissioner.....
1	64	Pat Marsh .....Sterling
1	65	John Hultquist .....Wray
2	67	R. J. McGrath.....Lamar
4	68	Dean S. Hainey .....Ridgway
7	69	F. C. Hardman.....Cedar
5	70	Geo. Maxwell Anderson .....DeBeque

CHAPTER I

FINANCIAL STATEMENT

FEES RECEIVED BY OFFICE DURING BIENNIUM

January 1, 1937, to December 31, 1938

Filings	\$4,326.00
Sale of Blueprints.....	753.02
Certifications	160.00
Examination Dam Plans.....	420.00
Office Labor.....	45.20
Recording Transfer Filings.....	3.00
Filing Transfer Decrees.....	20.00
Total	<u>\$5,727.22</u>

APPROPRIATIONS

July 1, 1937, to June 30, 1939

PERSONAL SERVICES	Appropriation	SPENT		BALANCE	
		1937-38	1938-39**	1937-38	1938-39
State Engineer	\$ 10,000.00	\$ 5,000.00	\$ 4,166.68	\$ 0.00	\$ 833.32
Deputy State Engineer	6,000.00	3,000.00	2,500.00	0.00	500.00
Special Deputy—South Platte	5,000.00	2,500.00	2,033.34	0.00	416.66
Special Deputy—La Plata	5,000.00	2,500.00	2,033.34	0.00	416.66
Special Deputies (Part Time)	6,500.00	2,149.00	1,806.50	1,101.00	1,443.50
Five Division Engineers	25,000.00	12,500.00	10,416.70	0.00	2,083.30
Chief Hydrographer	4,800.00	2,400.00	2,000.00	0.00	400.00
Five Hydrographers	13,000.00	8,850.00	7,500.00	150.00	1,500.00
Chief Clerk and Asst Sec'y, Board of Examiners for Engineers and Land Surveyors	5,200.00*	2,600.00	2,166.68	0.00	433.32
Two Stenographers	6,000.00	3,000.00	2,500.00	0.00	500.00
TOTAL	\$ 91,500.00	\$ 44,499.00	\$ 37,223.24	\$ 1,251.00	\$ 8,526.76
* \$1,200.00 to be paid from funds of said Board.					
**To May 1, 1939.					
MAINTENANCE AND OPERATION					
General Incidental	\$ 3,000.00	\$ 1,493.10	\$ 998.95	\$ 6.90	\$ 501.05
S. E. Incidental and Gage Readers	8,000.00	3,664.90	2,640.21	335.10	1,359.79
Travel and Contingent for State Engineer and Deputy	4,000.00	1,924.93	1,159.56	75.07	840.44
Travel Expense for:					
Special Deputy—South Platte	1,600.00	799.94	621.30	.06	178.70
Special Deputy—La Plata	1,600.00	799.01	628.13	.99	171.87
Special Deputies—Part Time	3,500.00	1,367.04	927.45	382.96	822.55
Chief Hydrographer	1,200.00	580.61	480.79	19.39	119.21
Five Division Engineers	8,000.00	3,692.24	2,724.31	307.76	1,275.69
Five Hydrographers	10,000.00	3,944.80	3,655.73	1,055.20	1,344.27
TOTAL	\$ 40,900.00	\$ 18,266.57	\$ 13,836.43	\$ 2,183.43	\$ 6,613.57
GRAND TOTAL	\$ 132,400.00	\$ 62,765.57	\$ 51,059.67	\$ 3,434.43	\$ 15,140.33

CHAPTER II

ADMINISTRATION

The year 1937 continued the dry cycle, being the fourth consecutive year of below normal run-off. During years of low stream flow, many perplexing problems of administration confront the water officials, and the satisfactory manner in which these are handled by the local officials is best evidenced by the absence of appeals to the State Engineer. Lack of litigation as a result of the rulings of the water officials during this biennium, so prevalent in past years, is striking evidence of the understanding and cooperation between the water users and the administrative officials.

The major case, involving a fundamental construction of the irrigation statutes, decided by the Supreme Court in the fall of 1936, is the so-called Park Reservoir case, in which the principle was definitely established that water should be distributed strictly in order of priority, regardless of whether the use was for storage or direct irrigation. Following this decision by the Supreme Court it was anticipated that many vexing problems would confront the water officials during the season of 1937 in the administration of the decrees for storage.

In this connection, it was necessary to define a year, since a reservoir is entitled to only one filling in any one year as against a junior appropriator demanding the water. This was set as from November 1st of one year to October 31st of the following year, and in general has met with approval. Due to low stream flow and the fact that the majority of decrees for direct irrigation are senior to those for storage purposes, less difficulty was experienced than was anticipated. However, detailed records of all storage and reservoir releases are absolutely essential to proper administration.

Approximately 50 per cent of the decrees for storage purposes have the provision of the statute written into the decrees, i.e., storage is limited to water not needed for direct or immediate irrigation. In such cases this provision of the decrees by the District Courts has been disregarded and the rule established by the Supreme Court applied to all decrees for storage purposes.

An interesting and difficult problem was presented for decision to the State Engineer as a result of an appeal by certain water users in Water District No. 3 from an order by the Division Engineer of Division No. 1 to the Water Commissioner of District No. 3. This order was issued on April 16, 1937, requiring that all diversions junior to October 1, 1888, be closed to supply a shortage and demand in Water District No. 1. The reason for the appeal was based upon the theory that a strict compliance with the order would result in a wasteful use of water in District No. 3;

and, further, that even though part or all of the available supply in District No. 3 was diverted to priorities for storage junior to the demand by District No. 1 no injury could result to the users in that District.

It was admitted that several times the then available supply was needed and could be diverted in District No. 3 on priorities senior to those demanding the water in District No. 1. The theory was also expressed that the laws vest in the water officials a certain degree of discretionary power in the administration of the court decrees, which would result in a more efficient use of the common water supplies of the state.

Following oral arguments and filing of written briefs, the State Engineer entered an opinion to the effect that, when it is obvious that a literal interpretation of a decree would result in an unwarranted wasteful use of the available supply the laws do vest in water officials certain discretionary authority to correct such conditions. Further, on the theory of effecting the most efficient use of the common supply, storage may be permitted in a junior reservoir; provided such storage is charged to the filling of the senior reservoir which may then be entitled to the water, but that such storage in a junior reservoir only on the plea of non-injury to another appropriator must be denied.

Another interesting problem was presented to the State Engineer for decision on an appeal from a ruling by the Division Engineer of Irrigation Division No. 3, involving the construction of a decree for storage, this being in the matter of the Trinchera Ranch Company, Appellant, v. The Trinchera Irrigation District, Respondent.

A provision in the decree of the District Court awarding a priority to a reservoir limits storage to the "non-irrigating" season, which is defined as being from November 1st in any year to April 1st of the following year.

Following receipt of a circular letter from this office in reference to the Park Reservoir case, in which the Supreme Court decided that water should be distributed in order of priority, regardless of whether the same was for storage or direct irrigation, the Division Engineer held that the provision in the reservoir decree, to the effect that storage was limited to the non-irrigation season, was void and of no effect. From this ruling the appeal was made by the owner of certain junior appropriations for direct irrigation. Oral arguments were heard and briefs filed by both parties. The order of the Division Engineer was overruled and the local officials directed to enforce the limitations as included in the reservoir decree whenever injury would result to adverse appropriators. This opinion was based in general upon the theory that no appeal had been taken by the reservoir company from the decree of the District Court; that such decree had been accepted and so administered prior to the present date; and further that, since said decree is not ambiguous, the water officials have no

authority to place an interpretation upon the decree which would have the effect of enlarging the use of water through the reservoir decree to the detriment of a junior appropriator.

In February, 1938, a complaint was filed by attorneys representing the Fort Lyon Canal Company and the Amity Mutual Irrigation Company, involving the administration of the waters impounded in the Sugar Loaf Reservoir, owned by the Colorado Fuel and Iron Company. Upon agreement of counsel, this matter was not set for hearing, and is still pending, awaiting further advice from the protestants.

An appeal from an order of the Special Deputy State Engineer of Irrigation Division No. 1 to the Water Commissioner of District No. 4, involving the administration of decrees, was made to the State Engineer in June, 1938. This appeal was made by the Bee Line Ditch Company as a result of an order to the Commissioner of District No. 4 to close the headgate of the Bee Line Ditch on the Little Thompson, to supply demands of the Evans Town Ditch diverting from the Big Thompson River some four miles below. Both parties were represented by counsel at a hearing held June 2, 1938.

This matter also involved the interpretation of the decree of the District Court awarding a transfer of the priority of the St. Louis Colony No. 1 Ditch on the South Platte River to the Evans Town Ditch on the Big Thompson River; and in addition a senior right by prescription and use was claimed by the owners of the Bee Line Ditch. After due consideration of the facts and law involved, an order was entered upholding the ruling of the Division Engineer.

A complaint was filed by certain users in District No. 1 against diversion of water by the Burlington Canal in District No. 2 on priority of date November, 1885, for use on lands under the Denver-Hudson Canal in the Henrylyn Irrigation District. A hearing was held in which all parties were represented by counsel. The main point at issue was as to the duty of the water officials in reference to the locus of use of water under a ditch, and that to permit use of water diverted by the Burlington Canal on lands in the Henrylyn District not originally under the Burlington Canal at the time the decree was awarded, constituted an enlarged use, to the injury of adverse appropriators on the stream.

It was decided that this matter was one for judicial determination, and that the water officials are bound by the decree of the District Court, when no ambiguity exists, and their authority limited to that of prevention of wasteful use of the water diverted.

In May, 1938, complaint was filed against an order of the Water Commissioner of District No. 3 as to administration of Dry Creek below the Douglass Reservoir. The Water Commissioner refused delivery of seepage water in Dry Creek to an

undecreed ditch when the water was needed and demanded by decreed appropriations below. The complainant claimed the exclusive right to the use of this water through a prescriptive right and as the result of unopposed use for a long period of time. After due consideration of all questions involved, and the statutes and court decisions, the action of the commissioner was upheld on the ground that the complainant could not legally claim a prescriptive right when he had failed to avail himself of opportunities to have his appropriation adjudicated by the court.

A complaint was filed and a hearing held on the question of the right of the Greeley Drain Extension Ditch Company to operate a pumping plant in the Poudre River to effect an exchange with water delivered to the river from the Greeley sewer system.

Since the right to the use of the sewer water had been adjudicated, it was held that the owner of the Greeley Drain Extension Ditch had the right under the exchange statute to make such exchange by means of a pumping plant, providing that the limitations of the decree were enforced, and that a proper and adequate measuring device was installed and maintained in the Greeley Drain Extension Ditch, and also that the owners thereof give ample notice to the water commissioner at times when such exchange of water was to be made.

In the spring of 1937, in cooperation with the Wyoming water officials, Parshall measuring flumes with automatic water stage recorders were installed upon seven representative ditches in the Laramie River basin in Colorado. This investigation was for the purpose of determining the actual amount of water diverted in the irrigation of the natural hay meadows in the Laramie River basin in Colorado, to the end that perhaps some agreement could be reached with the Wyoming officials over the administration of the Laramie River, in accordance with the decree of the United States Supreme Court.

Some 13,389 acre-feet were diverted to irrigate 1,162.2 acres, showing a headgate diversion of 11.52 acre-feet per acre. A special deputy was employed to check all diversions and was continuously in the field during this investigation.

During the fall and winter of 1937, several conferences were held with the Wyoming officials and the owners of ditches diverting water from Sand Creek, an interstate stream. The matter of a compact, or an agreement, between the interests in both states was discussed at length. As it would have been impossible to ratify a compact for use in 1938, an agreement was reached under which the officials of both states agreed to administer the stream during 1938.

The Divide Canal and Reservoir Company, the principal appropriator in Colorado, agreed to recognize demands for beneficial use through present ditches, to satisfy priorities in Wyoming with priority dates senior to June 15, 1899, excepting 16.81 acre feet

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over which there is some controversy as to ownership; that this question would be left for further consideration without prejudice to the rights of any of the parties in interest. With this exception, the water rights in each state were to be administered in order of priority under deputies representing the officials of both states, all ditches in both states to be equipped with suitable headgates and measuring devices. This arrangement resulted in general satisfaction to all parties during the 1938 season, and will no doubt lead to a permanent solution of this problem.

General adjudication proceedings are pending in ten water districts in the Colorado River basin, from which it is anticipated that some fifteen hundred claims will be adjudicated.

One of the most perplexing problems facing the water officials is the determination of the loss involved in the transit of reservoir water in the natural streams, this being particularly true in the Arkansas River drainage basin, where it is necessary to transit the water over long distances. This problem enters into all transmountain diversions, and in nearly all instances where the exchange of water is involved. Due to the many factors entering into the determination of the loss to be charged at the time these runs are made, it is imperative that extensive hydrographic investigations be made in the field, in which work the Department is severely handicapped through lack of funds. Extensive investigations in the Arkansas River basin in this connection will be necessary in the near future.

CHAPTER III

WATER SUPPLY, SEASONAL AND CROP CONDITIONS

The year 1937 in the South Platte drainage basin was the fourth consecutive year of sub-normal stream flow.

Soil conditions in the spring were excellent. However, lack of precipitation during April and May, together with below normal snowfall in the higher altitudes, presented a rather serious outlook. This situation was relieved by general rains during the latter part of May and in June, which resulted in a better than average small grain and hay crop.

Crops in general were above the average, although prices were low.

During 1938 the stream flow in the South Platte drainage basin was nearly normal, and crops suffered less from lack of water than in several preceding years.

Storage in the spring was below normal, but was materially increased during May and June, due to precipitation and high stream flow.

Floods on several of the tributary streams during September caused some damage to crops. However, ample storage was provided, raising the amount of carry-over storage to twice the normal supply. Return seepage in the fall was above normal, so that the supply for the season of 1939, particularly as to storage, is the best in many years.

Due, no doubt, to excess precipitation in September, the sugar beet crop was below normal in both yield and sugar content. Yield and price of the other principal crops were slightly above the average.

Livestock prices in the fall were encouraging, and prospects for the feeding industry are more than encouraging.

In the Arkansas drainage, an extremely severe winter in 1937-1938 prevented the customary irrigation, and considerable storage was permitted.

Soil conditions in the spring were excellent, and continued favorable until May 1st, when a drought set in, extended throughout the summer, and materially reduced all crop yields. As is usual under such conditions, crops were good under canals with senior appropriations and poor under those with junior decrees.

Precipitation during the growing season was only 57 per cent, and the discharge of the Arkansas River at Pueblo 73 per cent of normal. Storage on November 1st was 36 per cent of normal. Amount of storage on May 1, 1938, was less than 50 per cent of normal. However, the amount in storage on November 1st was above normal.

Insects and grasshoppers were prevalent, and considerable damage to all crops resulted.

Stream flow during 1937 in the San Luis Valley was again below normal, and the crop yield in general was short, due to lack of water during the growing season. The acreage planted to potatoes, which is the main cash crop, was about the average, although the yield was only 50 per cent of normal.

During the winter of 1937-1938 the snowfall was above normal and the condition of the soil in the spring was ideal for planting. Lack of precipitation during July and August caused some damage to row crops. However, the water supply in general was fair and the crop yields satisfactory, with the exception of the potato crop, which was damaged severely by insects. Prices of grain and hay were low.

Stream flow during 1937 on the western slope was erratic in some instances, being considerably below normal and in others above normal. However, crops suffered less from lack of irrigation water during 1937 than in other parts of the state. In many sections on the western slope when the stream flow was insufficient, rains occurred at crucial times and were of material benefit. All crops, with the exception of potatoes, were good, both as to yield and quality.

Precipitation during the winter of 1937-1938 was above normal, and available storage for the irrigation season far in excess of the average.

Water supply on the western slope in general during 1938 was well above the average. However, even in years of excess runoff, the need for supplemental storage on the tributary streams is apparent. Equalization of stream flow, through reservoir development, is of primary importance to the western slope.

Water from Taylor Park Reservoir was run for the first time during 1938. This supply is for lands under the Reclamation Project in the Uncompahgre Valley.

CHAPTER IV

DAMS—NEW CONSTRUCTION

The past biennium recorded the completion or initiation of construction of a number of storage reservoir dams of considerable magnitude, which will be of inestimable value to the state in safeguarding its rights in the waters of interstate streams, and of its citizens in the more efficient application of the same. The following is a record of such dams, their location, type, size, and capacities of reservoirs created:

ARKANSAS RIVER BASIN

NAME OF DAM	STREAM	TYPE	Ht. Ft.	Length Feet	Capacity Res. in Ac. Ft.
So. Catamount....	So. Catamount Cr....	Rolled earthfill with steel face.	71	1,133	3,330
St. Charles.....	St. Charles River....	Rolled earthfill	90	750	765
St. Charles No. 3... (C. F. & I. Co.)	St. Charles & Salt Cr..	Rolled earthfill	48	7,200	4,686

COLORADO RIVER BASIN

NAME OF DAM	STREAM	TYPE	Ht. Ft.	Length Feet	Capacity Res. in Ac. Ft.
Taylor Park.....	Taylor River.....	Rolled earthfill	168	850	106,000
Fruit Growers....	Alfalfa Draw.....	Rolled earthfill	47	1,600	4,300
Onion Valley*....	Crystal Cr.....	Rolled earthfill	53	1,640	5,000
Summit Lakes*....	Turkey & Lost Canon Creeks.....	Rolled earthfill	12	.....	.....
Vallecito.....	Pine River.....	Rolled earthfill	125	4,280	129,600
Williams Fork....	Williams Fk. R.....	Arched, gravity concrete	105	207	5,000
Green Mountain...	Blue River.....	Rolled earthfill	270	1,300	152,000
Granby.....	Colo. River.....	Rolled earthfill	223	765	496,000
Shadow Lake.....	Colo. River.....	Rolled earthfill	55	2,381	1,797
Grand Junction...		Rolled earthfill		No Plans	
Ground Hog.....	Ground Hog Cr.....	Rolled earthfill	115	720	22,000
Stillwater.....	Bear River.....	Rolled earthfill		No Plans	
Chapman.....	Sellar Cr.....	Thin concrete arch	40	160	120

SOUTH PLATTE RIVER BASIN

NAME OF DAM	STREAM	TYPE	Ht. Ft.	Capacity	
				Length Feet	Res. in Ac. Ft.
Ralston.....	Ralston Cr.....	Rolled earthfill	176	1,150	12,758
Fairplay.....	Four Mile Cr.....	Cobblestone-earth	32	800	140
Lake George.....	So. Platte River.....	Rolled earthfill	17	250	250
Upper Chinns*....	Fall River.....	Rolled earthfill	28	540	....
Manitou Park.....	Trout Creek.....	Rolled earthfill	15	550	92±
Slab Canon.....	Slab Canon Cr.....	Rolled earthfill	21	1,200	331

NORTH PLATTE RIVER BASIN

Roslyn.....	Howd Creek.....	Rolled earthfill	32	850	290
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*Enlargements

In addition to the above list of dams, many smaller dams coming under state supervision were constructed during the bien-nium by private enterprise or by federal agencies under provisions of the Taylor Grazing Act, Soil Conservation Act, Water Facilities Act, Forest and Park Service, while hundreds of small earth and rock dams, of heights less than 10 feet and not requiring state supervision, were built throughout the state by federal agencies in the interest of water and soil conservation.

Dam Repairs

As in past years, this Department has found it necessary to require a certain amount of repairs to be made on dams in the interest of public safety, of which the following may be mentioned:

North Sterling Dam. Completion of extensive riprapping of water face.

Buckhorn. Raising of dam and repair of spillway walls.

Lake George. Restoration of section of dam which failed many years ago, new outlet works, and enlarged spillway.

Pleasant Valley Dam. Closing of leaks beneath dam, due to gophers.

Leyden Dam. New reinforced concrete spillway.

Dry Creek Dam. Repairs to outlet and enlargement of spillways.

Clear Creek Dam. Repairs to outlet works and new oil-operated valves.

Lower Latham. Strengthen dam embankment and drainage.

Cortez Dam. Enlargement of outlet tube.

Big Pine Dam. New outlet tube and valve.

Puett Dam. New outlet tube.

Highline Dam. New outlet tube and control.

Cucharas Dam. New trash racks and repairs to valves.

Derry Ranch Dam. Raising, extension of outlet, drainage and enlargement of spillway.

Park Reservoir-Dam. Repairs to outlet conduit and enlargement of spillway.

In the summer of 1938 the State Engineer inspected about one hundred dams in western Colorado, as a result of which orders were issued to make repairs to 97 dams. These improvements consisted of raising and strengthening the dam embankments, lowering and enlarging of spillways, and repairs to outlet conduits and operating mechanism. These dams are located at high altitudes and the season available for such work is very short. As a partial result, some of the repairs ordered to be made were not carried out, but it is very gratifying that in most instances the owners evinced a fine spirit of cooperation, as a result of which many needed repairs to a comparatively large number of dams were made, which will greatly increase the safety and utility of these structures.

There are nearly eleven hundred existing dams in this state coming under state supervision, both as to maintenance and impounding of water. Many of these structures were built years ago, prior to the availability of present day knowledge of the characteristics and action of construction materials and construction methods. Neither was there much previous investigation of geological conditions or studies of the hydrology of the drainage basin above such dams. As a result, continuous inspection and frequent repairs to these structures are necessary in the interest of public safety.

Dam Failures

Fortunately but one dam failure of any consequence occurred within the biennium. This was the failure of the Fruit Growers Dam, an old earth structure about 36 feet in height, located across Alfalfa Draw above the town of Austin. Excessive saturation caused a serious slip on the downstream face, which close the outlet conduit. In an attempt to lower the water back of the dam, a shallow cut was made through the dam near the spillway. The outflow rapidly destroyed about 100 feet of the dam.

The failure of the dam caused heavy losses to railroad, highways, and private property, in addition to the loss of the dam itself, which resulted in the filing of several damage claims by property owners. The owners of the dam adjusted or disposed of these claims and thereafter the owners of a majority of the lands served by the original reservoir organized the Orchard City Irrigation District for the purpose of financing the reconstruction of the dam under the provisions of the U. S. Reclamation Act. The dam has been replaced by the Bureau with an entirely new structure of a maximum height of 53 feet, located a short distance below the original dam, at a cost of about \$160,000. The capacity of the original reservoir will be increased to 4,300 acre-feet.

CHAPTER V

Snow Surveys

This Department continued its cooperation with the Bureau of Agricultural Engineering of the U. S. Department of Agriculture in collecting data on snow deposits and water content at stations maintained throughout the state, and in the establishment of additional stations or snow ranges. At the end of the biennium 68 ranges were being maintained in the state. The results of such observations, taken on the first of the months of February, March and April, are published currently by the Bureau of Agricultural Engineering, and in time should prove to be of material value to the water users of the state and to the scientific world.

CHAPTER VI

IRRIGATION DISTRICT COMMISSION

Within the biennium but two applications for the creation of irrigation districts under the Act of 1921 came before the Commission for consideration.

Application was made by the Fruit Growers Ditch and Reservoir Company for the creation of the Orchard City Irrigation District, to enable the owners to finance the reconstruction, through the provisions of the Reclamation Act, of the Fruit Growers Dam, the failure of which is described under "Dam Failures."

The other application was made by the water users under the existing canal systems in Pine River Valley in southwestern Colorado, for the creation of the Pine River Irrigation District, to enable them to cooperate with the U. S. Department of Indian Affairs in the construction of the large earthfill Vallecito dam on Pine River. This development is urgently needed to provide supplemental water supplies for an old irrigated area located outside and also within the Jicarillo Apache Indian Reservation, and for flood control. The total area, subject to the bonds of the District, is 69,000 acres, of which 34,000 acres are irrigated and 35,000 acres are arable. Of these amounts, 29,000 are irrigated by whites and 5,000 by Indians or their lessees. The flow of Pine River when regulated by the Vallecito Reservoir, it is estimated, is ample except in the years of lowest flow to furnish these lands with an adequate water supply. Following an investigation of these projects, the State Engineer made his preliminary reports to the County Commissioners, as required by the Irrigation District Act. Under the provisions of the act no further approval of the Irrigation District Commission is required where the districts are financed under a contract with the U. S. Government.

PUBLIC IRRIGATION DISTRICT COMMISSION

The Thirtieth General Assembly provided for the creation of Public Irrigation Districts and the Board of Conservation of Colorado, to consist of the Governor, Attorney General and State Engineer. Such districts are mutual water conservation districts, or political subdivisions of the state, organized for the purpose of creating works useful for the storage, diversion, distribution, sale, or for furnishing water for irrigation requirements, or for flood control purposes. Such districts are specifically prohibited from levying or collecting taxes for the purpose of paying any indebtedness or obligations of such district, and may issue revenue bonds only. Under the provisions of this act there have been approved to date the following public irrigation districts:

NAME OF DISTRICT	COUNTY	Character of Major Works	Date Approved
W. Divide Cr. Pub. Ir. Dist.	Garfield	Haystack Reservoir	8-28-35
Mancos Valley Pub. Ir. Dist.	Montezuma	Jackson Gulch Reservoir	8-28-35
Yampa Res. Pub. Ir. Dist.	Routt	Stillwater Reservoir	8-31-35
Silt Pub. Ir. Dist.	Garfield	Diversion Canal	9- 3-35
Hugo Pub. Ir. Dist.	Lincoln	Flood Control	9- 3-35
Roan Creek Pub. Ir. Dist.	Mesa	Roan Creek Reservoir	9- 3-35
Apishapa Pub. Ir. Dist.	Otero	Reconstruction Apishapa Res.	9- 3-35
La Plata Pub. Ir. Dist.	La Plata	Long Hollow & Red Mesa Res.	9- 3-35
Chivington Pub. Ir. Dist.	El Paso	Reconstruction old project	9- 3-35
North Fork Pub. Ir. Dist.	Delta	Horse Ranch & Beaver Res.	9- 3-35
Conejos Pub. Ir. Dist.	Conejos	Platora & Mogote Reservoir	9- 4-35
Pine River Pub. Ir. Dist.	La Plata	Vallecito Reservoir	9-18-35
Cherry Valley Pub. Ir. Dist.	Arapahoe	Storage Reservoir	9- 9-36
Montezuma Valley Pub. Ir. Dist.	Montezuma	Groundhog Reservoir	8-28-38
Troublesome Creek Pub. Ir. Dist.	Grand	Rabbit Ear Reservoir	9-17-38

CHAPTER VII

SPECIAL REPORTS BY STATE ENGINEER

In addition to the numerous reports prepared in connection with applications for federal aid for water conservation works during the biennium, the State Engineer prepared two extensive reports, one covering studies on sedimentation of the proposed large Caddoa Reservoir on the Arkansas River, and another as Chairman of the Committee of the American Society of Civil Engineers on Interstate Water Matters, which consists of a review of past and pending interstate litigation over interstate streams and the history of interstate river compacts.

CHAPTER VIII

CONFERENCES ATTENDED BY THE STATE ENGINEER

During the biennium the State Engineer attended the following conferences of major importance having to do with water conservation in which Colorado has a vital interest:

Flood control hearings before the U. S. Army Engineers on:

Missouri River at McCook, Nebraska.

Fountain River at Colorado Springs.

Cherry Creek at Denver.

Bear Creek at Denver.

Rio Grande at Monte Vista.

Arkansas River at Lamar.

Regional Planning Board meeting on:

Upper Missouri River at Denver.

Lower Missouri River at Omaha and Kansas City.

Annual meeting of the Association of Western State Engineers at Helena, 1937.

Annual meeting of the Association of Western State Engineers at Phoenix, 1938.

American Society of Civil Engineers at Salt Lake City, 1938.

National Reclamation Association, Spokane, 1937.

National Reclamation Association, Reno, 1938.

Meetings of Colorado River Basin Fact Finding Committee at Denver, Salt Lake City, Reno and Phoenix.

In addition, the State Engineer attended several meetings with water users' organizations throughout the state, and three meetings of the Rio Grande Compact Commission at Santa Fe, covering a total of more than a month.

CHAPTER IX

DISASTROUS FLOODS

One of the most disastrous floods in the history of the state occurred in September, 1938, as a result of heavy rainfall over tributaries of the South Platte River. The most serious of these occurred on the lower reaches of Bear Creek and resulted in great damage to resorts and the towns of Starbuck and Morrison, and to highways, irrigation structures, irrigated lands, and in the deaths of several persons.

This general storm extended along the east front of the Rocky Mountains and caused great floods in Clear Creek, Boulder Creek, St. Vrain and Big Thompson Rivers, and to a lesser extent

in the Cache la Poudre River. Much damage to highways, railroads, irrigation systems, urban property, and lands occurred. As a partial offset to the damages created, municipalities and irrigation interests were enabled to capture and store more than 150,000 acre-feet of water for the irrigation season of 1939.

The largest flood which has occurred on the Cherry Creek drainage since the Kenwood flood control dam above Denver was completed in 1936 was regulated to a stage which caused no damage in Denver.

Partially as a result of these floods, the Army Engineers have held hearings to determine if engineering investigations looking to flood control measures are justified under the provisions of the Federal Flood Control Act.

CHAPTER X

ADMINISTRATION OF INTERSTATE RIVER COMPACTS

La Plata River Compact

The administration of this compact during the biennium was carried out, under the general supervision of this Department, by J. R. Williams, Division Engineer of Irrigation Division No. 7.

As a result of a recent decision of the Supreme Court of Colorado in the case of *The La Plata River and Cherry Creek Ditch Company v. Hinderlider* (93 Colo. 129 and 101 Colo. 73), reversing the decision of the lower court, some uncertainty arose early in 1937 concerning the procedure to be followed by the water officials in the administration of the Compact in 1937. However, as the result of a general agreement among the parties in interest and the lower court, the order of the Colorado Supreme Court was held in abeyance until the Attorney General could prosecute an appeal to the U. S. Supreme Court. The case was argued before the latter court on February 10 and 11, 1938, and decision rendered April 25, 1938. (*Hinderlider v. La Plata River and Cherry Creek Ditch Co.*, 58 Sup. Ct. Rep. 803, 1937.)

The decision reversing the Supreme Court of Colorado held that states have the unquestioned authority to agree upon the division and use of the waters of an interstate stream, even though such division and use may have the effect of disturbing or destroying the rights of individual appropriators which had theretofore been recognized by the laws of either state. Hence, litigation over the administration of this Compact, initiated in 1928, has never affected the actual administration of the Compact between the states, and the decision of the U. S. Supreme Court, in upholding the validity of the Compact, doubtless will remove the Compact from further attack.

No friction arose between the representatives of the state engineers of the two states over the administration of the Compact during the biennium. This was very largely due to the exercise of good judgment on the part of the representatives of the state engineers of Colorado and New Mexico, and a degree of tolerance on the part of the water users, which are essential elements in the successful administration of interstate agreements.

South Platte River Compact

In keeping with the previous history of the administration of this Compact between Colorado and Nebraska, administration during the past biennium was without friction of any kind with our sister state.

Colorado River Compact

No administration of this Compact between the four upper and three lower states of the Colorado River system has ever been required or attempted. Cooperative work was carried on between the states and the Federal Government in connection with investigations and studies of the land, water, and power resources of the Colorado River Basin.

Temporary Rio Grande Compact

Under the terms of the temporary Rio Grande Compact the Rio Grande Compact Committee was required to collect, compile, and exchange hydrographic data on the flow of the Rio Grande, and to meet in January and prepare an annual report to the Governors of the three states of the activities of the Committee during the preceding year. The temporary Compact was allowed to expire on October 1, 1937, but by unanimous consent the members of the Committee agreed to continue their work for the remainder of the calendar year 1937, and exchanged at Santa Fe in March, 1938, at the signing of the permanent Compact, all river flow data for the year 1937.

Permanent Rio Grande Compact

The earlier history of negotiations between Colorado, New Mexico, and Texas for a compact on the Rio Grande is set forth in the biennial report of this Department for 1935-1936. Since that report negotiations were continued by the Commissioners representing the three states, with the result that a permanent Compact was signed at Santa Fe, New Mexico, on March 18, 1938, which has been ratified by the Legislatures of the three states and is now before the Congress of the United States for approval.

The importance of this Compact to our state and to the water users of one of its greatest agricultural areas, it is believed, justifies the inclusion herein of a brief recitation of the history of the negotiations leading up to the signing of the Compact, the Compact itself, and an analysis of the same.

This permanent Compact, it is believed, fully protects present and future uses of waters in the San Luis Valley, and the San Juan Basin in Colorado against exportations of water out of that basin for use in the Rio Grande Basin in New Mexico, except upon the conditions stated in the Compact. It also safeguards the rights of the water users under federal reclamation projects in New Mexico and Texas, recognizes the rights of Indian tribes, the Federal Government's obligation to Indian tribes, and to the Republic of Mexico under existing treaty obligations.

When approved by the Congress of the United States, this Compact will have composed some forty years of differences between these states, and the pending suit in the Supreme Court of the United States between the states of Texas and New Mexico and its citizens, and will permit extensive water conservation measures in the San Luis Valley, which have these many years been held in abeyance, due to opposition from the citizens of the two lower states and the Federal Government.

This Compact was signed at Santa Fe, New Mexico, at 5:30 p. m. on March 18, 1938, by

M. C. Hinderlider, Commissioner for Colorado,

Thomas M. McClure, Commissioner for New Mexico,

Frank B. Clayton, Commissioner for Texas, and

Approved by S. O. Harper, Chairman, representative of the President of the United States,

following negotiations since December 10, 1934. It replaces the temporary five-year compact, signed at Santa Fe on February 12, 1929, the life of which was later extended by action of the Legislatures of the three states to June 1, 1936, and again thereafter to October 1, 1936, on which latter date it was allowed to expire.

The fundamental intent and objective of the former temporary compact was the "equitable apportionment of the use of the waters of the Rio Grande among said states."

During the period 1933 to 1935, inclusive, the State Engineer of Colorado carried on field investigations and studies, to ascertain the extent of past uses, future requirements, and need for stabilizing the water supplies of the San Luis Valley through the construction of additional regulatory reservoirs, and concerning other related matters.

The most serious problem of water supply in the San Luis Valley is the distorted uses made of the available water supplies as the result of unregulated stream flow. To correct this condition, the citizens of the San Luis Valley have struggled for more than forty years to secure the construction of regulatory reservoirs, but in these attempts have been successfully opposed by the water users in the lower states, who have taken the position that additional reservoirs of magnitude in the Valley would result in extended uses of water in Colorado, to their great detriment.

In this view they were joined by agencies of the Federal Government, which has extensive investments along the Rio Grande in New Mexico and Texas. As a result, embargoes were placed upon further reservoir development in the San Luis Valley.

The first embargo was instituted by order of the Secretary of the Interior in 1896, but was finally removed in 1925. Later a further embargo imposed by presidential mandate, issued on September 23, 1935, provided that no approval should be given of "any application for a project involving the use of Rio Grande waters without securing from the National Resources Committee a prompt opinion on it from all relevant points of view."

Following the announcement of this further embargo, an agreement was entered into on December 3, 1935, between the representatives of the National Resources Committee and the Commissioners representing the three states, whereby a joint investigation would be made to determine the present and potential water and land resources of the Rio Grande Basin, and other factual data needful to a full understanding of the problems in each of the three states, which factual data might be used in effecting an equitable division of the waters of the river.

This joint investigation, which required an expenditure of about \$400,000, of which \$18,333 was contributed by each of the three states, was carried out under the general supervision of the Water Resources Committee of the National Resources Committee, through the collaboration of the U. S. Bureau of Agricultural Engineering, the U. S. Geological Survey, the U. S. Bureau of Reclamation, the American Section of the Rio Grande International Boundary Commission, and other federal agencies, and the Engineering Departments of the States of Colorado and New Mexico.

This study, officially known as the Rio Grande Joint Investigation, was carried on continuously throughout the year 1936 and a portion of 1937. The final report was submitted to the Commissioners for the three states in June, 1937. This investigation constitutes what is believed to have been the most comprehensive, and in many respects detailed study ever made of the water and land resources of a river basin in the arid West.

The study and conclusions confirmed the former position taken by Colorado, with respect to the feasibility of extensive reservoir development in the San Luis Valley without material injury to the interests of the lower states, and in addition provided the factual data from a disinterested agency, upon which the three states could agree as a basis for further negotiations.

Beginning on December 10, 1934, the Compact Commissioners and their legal and engineering advisers held six conferences, all at Santa Fe, at which lay representatives of the water users throughout the Upper Basin were in attendance.

Following the first two meetings, on December 10, 1934, and January 28, 1935, the representatives of the National Resources

Committee attended all the conferences, which occurred on December 2, 1935; March 3, 1937; September 27, 1937; and March 3, 1938, at which latter meeting the Compact was signed.

The problems with which the Commissioners and their advisers were confronted involved more complications than have arisen in any previous interstate river controversy, from the following causes:

First. It long has been known that the total water supply furnished by the Rio Grande, even when fully regulated, was barely sufficient to meet the needs of old developed areas;

Second. The need for regulation of stream flow in the San Luis Valley, without injury to the rights of New Mexico and Texas;

Third. Serious conflicts of claims between water users under the Federal Elephant Butte Reclamation Project, and those in upper New Mexico and Colorado;

Fourth. Claims of the Bureau of Indian Affairs in behalf of its Indian charges;

Fifth. The claims of the Department of the Interior, as a result of Federal expenditures through the U. S. Bureau of Reclamation;

Sixth: The interests of the Reconstruction Finance Corporation, by virtue of loans to the Middle Rio Grande Conservancy District;

Seventh. The interest of the Department of State, arising out of the Federal Government's treaty obligations to Mexico;

Eighth: The more recent problems arising out of the construction of the Caballo Reservoir below the Elephant Butte Reservoir and certain other activities of the American Section of the Rio Grande International Boundary Commission;

Ninth. Claims and counter-claims arising out of the pending interstate suit between Texas, New Mexico, and the Middle Rio Grande Conservancy District;

Tenth. Threatened intervention in this suit by the Federal Government.

RIO GRANDE COMPACT

The State of Colorado, the State of New Mexico, and the State of Texas, desiring to remove all causes of present and future controversy among these states and between citizens of one of these states and citizens of another state with respect to the use of the waters of the Rio Grande above Fort Quitman, Texas, and being moved by considerations of interstate comity, and for the purpose of effecting an equitable apportionment of such waters, have resolved to conclude a Compact for the attainment of these purposes, and to that end, through their respective Governors, have named as their respective Commissioners:

For the State of Colorado—M. C. Hinderlider

For the State of New Mexico—Thomas M. McClure

For the State of Texas—Frank B. Clayton

who, after negotiations participated in by S. O. Harper, appointed by the President as the representative of the United States of America, have agreed upon the following articles, to-wit:

Article I

(a) The State of Colorado, the State of New Mexico, the State of Texas, and the United States of America, are hereinafter designated "Colorado," "New Mexico," "Texas," and the "United States," respectively.

(b) "The Commission" means the agency created by this Compact for the administration thereof.

(c) The term "Rio Grande Basin" means all of the territory drained by the Rio Grande and its tributaries in Colorado, in New Mexico, and in Texas above Fort Quitman, including the Closed Basin in Colorado.

(d) The "Closed Basin" means that part of the Rio Grande Basin in Colorado where the streams drain into the San Luis Lakes and adjacent territory, and do not normally contribute to the flow of the Rio Grande.

(e) The term "tributary" means any stream which naturally contributes to the flow of the Rio Grande.

(f) "Transmountain Diversion" is water imported into the drainage basin of the Rio Grande from any stream system outside of the Rio Grande Basin, exclusive of the Closed Basin.

(g) "Annual Debits" are the amounts by which actual deliveries in any calendar year fall below scheduled deliveries.

(h) "Annual Credits" are the amounts by which actual deliveries in any calendar year exceed scheduled deliveries.

(i) "Accrued Debits" are the amounts by which the sum of all annual debits exceeds the sum of all annual credits over any common period of time.

(j) "Accrued Credits" are the amounts by which the sum of all annual credits exceeds the sum of all annual debits over any common period of time.

(k) "Project Storage" is the combined capacity of Elephant Butte Reservoir and all other reservoirs actually available for the storage of usable water below Elephant Butte and above the first diversion to lands of the Rio Grande Project, but not more than a total of 2,638,860 acre-feet.

(l) "Usable Water" is all water, exclusive of credit water, which is in project storage and which is available for release in accordance with irrigation demands, including deliveries to Mexico.

(m) "Credit Water" is that amount of water in project storage which is equal to the accrued credit of Colorado, or New Mexico, or both.

(n) "Unfilled Capacity" is the difference between the total physical capacity of project storage and the amount of usable water then in storage.

(o) "Actual Release" is the amount of usable water released in any calendar year from the lowest reservoir comprising project storage.

(p) "Actual Spill" is all water which is actually spilled from Elephant Butte Reservoir, or is released therefrom for flood control, in excess of the current demand on project storage and which does not become usable water by storage in another reservoir; provided, that actual spill of usable water cannot occur until all credit water shall have been spilled.

(q) "Hypothetical Spill" is the time in any year at which usable water would have spilled from project storage if 790,000 acre-feet had been released therefrom at rates proportional to the actual release in every year from the starting date to the end of the year in which hypothetical spill occurs; in computing hypothetical spill the initial condition shall be the amount of usable water in project storage at the beginning of the calendar year following the effective date of this Compact, and thereafter the initial condition shall be the amount of usable water in project storage at the beginning of the calendar year following each actual spill.

Article II

The Commission shall cause to be maintained and operated a stream gaging station equipped with an automatic water stage recorder at each of the following points, to-wit:

- (a) On the Rio Grande near Del Norte above the principal points of diversion to the San Luis Valley;
- (b) On the Conejos River near Mogote;
- (c) On the Los Pinos River near Ortiz;
- (d) On the San Antonio River at Ortiz;
- (e) On the Conejos River at its mouth near Los Sauces;
- (f) On the Rio Grande near Lobatos;
- (g) On the Rio Chama below El Vado Reservoir;
- (h) On the Rio Grande at Otowi Bridge near San Ildefonso;
- (i) On the Rio Grande near San Acacia;
- (j) On the Rio Grande at San Marcial;
- (k) On the Rio Grande below Elephant Butte Reservoir;
- (l) On the Rio Grande below Caballo Reservoir.

Similar gaging stations shall be maintained and operated below any other reservoir constructed after 1929, and at such

other points as may be necessary for the securing of records required for the carrying out of the Compact; and automatic water stage recorders shall be maintained and operated on each of the reservoirs mentioned, and on all others constructed after 1929.

Such gaging stations shall be equipped, maintained and operated by the Commission directly or in cooperation with an appropriate Federal or state agency, and the equipment, method and frequency of measurement at such stations shall be such as to produce reliable records at all times.

Article III

The obligation of Colorado to deliver water in the Rio Grande at the Colorado-New Mexico State Line, measured at or near Lobatos, in each calendar year, shall be ten thousand acre-feet less than the sum of those quantities set forth in the two following tabulations of relationship which correspond to the quantities at the upper index stations:

DISCHARGE OF CONEJOS RIVER

Quantities in thousands of acre-feet

Conejos Index Supply (1)	Conejos River at Mouths (2)
100	0
150	20
200	45
250	75
300	109
350	147
400	188
450	232
500	278
550	326
600	376
650	426
700	476

Intermediate quantities shall be computed by proportional parts.

(1) Conejos Index Supply is the natural flow of Conejos River at the U.S.G.S. gaging station near Mogote during the calendar year, plus the natural flow of Los Pinos River at the U.S.G.S. gaging station near Ortiz and the natural flow of San Antonio River at the U.S.G.S. gaging station at Ortiz, both during the months of April to October, inclusive.

(2) Conejos River at Mouths is the combined discharge of branches of this river at the U.S.G.S. gaging stations near Los Sauces during the calendar year.

DISCHARGE OF RIO GRANDE EXCLUSIVE OF CONEJOS RIVER

Quantities in thousands of acre-feet

Rio Grande at Del Norte (3)	Rio Grande at Lobatos less Conejos at Mouths (4)
200	60
250	65
300	75
350	86
400	98
450	112
500	127
550	144
600	162
650	182
700	204
750	229
800	257
850	292
900	335
950	380
1,000	430
1,100	540
1,200	640
1,300	740
1,400	840

Intermediate quantities shall be computed by proportional parts.

(3) Rio Grande at Del Norte is the recorded flow of the Rio Grande at the U.S.G.S. gaging station near Del Norte during the calendar year (measured above all principal points of diversion to San Luis Valley) corrected for the operation of reservoirs constructed after 1937.

(4) Rio Grande at Lobatos less Conejos at Mouths is the total flow of the Rio Grande at the U.S.G.S. gaging station near Lobatos, less the discharge of Conejos River at its Mouths, during the calendar year.

The application of these schedules shall be subject to the provisions hereinafter set forth and appropriate adjustments shall be made for (a) any change in location of gaging stations; (b) any new or increased depletion of the run-off above inflow index gaging stations; and (c) any transmountain diversions into the drainage basin of the Rio Grande above Lobatos.

In event any works are constructed after 1937 for the purpose of delivering water into the Rio Grande from the Closed Basin, Colorado shall not be credited with the amount of such water delivered, unless the proportion of sodium ions shall be less than forty-five per cent of the total positive ions in that water when the total dissolved solids in such water exceeds three hundred fifty parts per million.

Article IV

The obligation of New Mexico to deliver water in the Rio Grande at San Marcial, during each calendar year, exclusive of the months of July, August and September, shall be that quantity set forth in the following tabulation of relationship, which corresponds to the quantity at the upper index station:

DISCHARGE OF RIO GRANDE AT OTOWI BRIDGE AND AT SAN MARCIAL EXCLUSIVE OF JULY, AUGUST AND SEPTEMBER

Quantities in thousands of acre-feet

Otowi Index Supply (5)	San Marcial Index Supply (6)
100	0
200	65
300	141
400	219
500	300
600	383
700	469
800	557
900	648
1,000	742
1,100	839
1,200	939
1,300	1,042
1,400	1,148
1,500	1,257
1,600	1,370
1,700	1,489
1,800	1,608
1,900	1,730
2,000	1,856
2,100	1,985
2,200	2,117
2,300	2,253

Intermediate quantities shall be computed by proportional parts.

(5) The Otowi Index Supply is the recorded flow of the Rio Grande at the U.S.G.S. gaging station at Otowi Bridge near San Ildefonso (formerly station near Buckman) during the calendar year, exclusive of the flow during the months of July, August and September, corrected for the operation of reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and Otowi Bridge.

(6) San Marcial Index Supply is the recorded flow of the Rio Grande at the gaging station at San Marcial during the calendar year exclusive of the flow during the months of July, August and September.

The application of this schedule shall be subject to the provisions hereinafter set forth and appropriate adjustments shall be made for (a) any change in location of gaging stations; (b) depletion after 1929 in New Mexico at any time of the year of the natural run-off at Otowi Bridge; (c) depletion of the run-off during July, August and September of tributaries between Otowi Bridge and San Marcial, by works constructed after 1937; and (d) any transmountain diversions into the Rio Grande between Lobatos and San Marcial.

Concurrent records shall be kept of the flow of the Rio Grande at San Marcial, near San Acacia, and of the release from Elephant Butte Reservoir, to the end that the records at these three stations may be correlated.

Article V

If at any time it should be the unanimous finding and determination of the Commission that because of changed physical conditions, or for any other reason, reliable records are not obtainable, or cannot be obtained, at any of the stream gaging stations herein referred to, such stations may, with the unanimous approval of the Commission, be abandoned, and with such approval another station, or other stations, shall be established and new measurements shall be substituted which, in the unanimous opinion of the Commission, will result in substantially the same results, so far as the rights and obligations to deliver water are concerned, as would have existed if such substitution of stations and measurements had not been so made.

Article VI

Commencing with the year following the effective date of this Compact, all credits and debits of Colorado and New Mexico shall be computed for each calendar year; provided, that in a year of actual spill no annual credits nor annual debits shall be computed for that year.

In the case of Colorado, no annual debit nor accrued debit shall exceed 100,000 acre-feet, except as either or both may be caused by holdover storage of water in reservoirs constructed

after 1937 in the drainage basin of the Rio Grande above Lobatos. Within the physical limitations of storage capacity in such reservoirs, Colorado shall retain water in storage at all times to the extent of its accrued debit.

In the case of New Mexico, the accrued debit shall not exceed 200,000 acre-feet at any time, except as such debit may be caused by holdover storage of water in reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and San Marcial. Within the physical limitations of storage capacity in such reservoirs, New Mexico shall retain water in storage at all times to the extent of its accrued debit. In computing the magnitude of accrued credits or debits, New Mexico shall not be charged with any greater debit in any one year than the sum of 150,000 acre-feet and all gains in the quantity of water in storage in such year.

The Commission by unanimous action may authorize the release from storage of any amount of water which is then being held in storage by reason of accrued debits of Colorado or New Mexico; provided, that such water shall be replaced at the first opportunity thereafter.

In computing the amount of accrued credits and accrued debits of Colorado or New Mexico, any annual credits in excess of 150,000 acre-feet shall be taken as equal to that amount.

In any year in which actual spill occurs, the accrued credits of Colorado, or New Mexico, or both, at the beginning of the year shall be reduced in proportion to their respective credits by the amount of such actual spill; provided, that the amount of actual spill shall be deemed to be increased by the aggregate gain in the amount of water in storage, prior to the time of spill, in reservoirs above San Marcial constructed after 1929; provided, further, that if the Commissioners for the States having accrued credits authorize the release of part, or all, of such credits in advance of spill, the amount so released shall be deemed to constitute actual spill.

In any year in which there is actual spill of usable water, or at the time of hypothetical spill thereof, all accrued debits of Colorado, or New Mexico, or both, at the beginning of the year shall be cancelled.

In any year in which the aggregate of accrued debits of Colorado and New Mexico exceeds the minimum unfilled capacity of project storage, such debits shall be reduced proportionally to an aggregate amount equal to such minimum unfilled capacity.

To the extent that accrued credits are impounded in reservoirs between San Marcial and Courchesne, and to the extent that accrued debits are impounded in reservoirs above San Marcial, such credits and debits shall be reduced annually to compensate for evaporation losses in the proportion that such credits or debits bore to the total amount of water in such reservoirs during the year.

Article VII

Neither Colorado nor New Mexico shall increase the amount of water in storage in reservoirs constructed after 1929 whenever there is less than 400,000 acre-feet of usable water in project storage; provided, that if the actual releases of usable water from the beginning of the calendar year following the effective date of this Compact, or from the beginning of the calendar year following actual spill, have aggregated more than an average of 790,000 acre-feet per annum, the time at which such minimum stage is reached shall be adjusted to compensate for the difference between the total actual release and releases at such average rate; provided, further, that Colorado or New Mexico, or both, may relinquish accrued credits at any time, and Texas may accept such relinquished water, and in such event the state, or states, so relinquishing shall be entitled to store water in the amount of the water so relinquished.

Article VIII

During the month of January of any year the Commissioner for Texas may demand of Colorado and New Mexico, and the Commissioner for New Mexico may demand of Colorado, the release of water from storage reservoirs constructed after 1929 to the amount of the accrued debits of Colorado and New Mexico, respectively, and such releases shall be made by each at the greatest rate practicable under the conditions then prevailing, and in proportion to the total debit of each, and in amounts, limited by their accrued debits, sufficient to bring the quantity of usable water in project storage to 600,000 acre-feet by March first and to maintain this quantity in storage until April thirtieth, to the end that a normal release of 790,000 acre-feet may be made from project storage in that year.

Article IX

Colorado agrees with New Mexico that in event the United States or the State of New Mexico decides to construct the necessary works for diverting the waters of the San Juan River, or any of its tributaries, into the Rio Grande, Colorado hereby consents to the construction of said works and the diversion of waters from the San Juan River, or the tributaries thereof, into the Rio Grande in New Mexico, provided the present and prospective uses of water in Colorado by other diversions from the San Juan River, or its tributaries, are protected.

Article X

In the event water from another drainage basin shall be imported into the Rio Grande Basin by the United States or Colorado or New Mexico, or any of them jointly, the State having the

right to use of such water shall be given proper credit therefor in the application of the schedules.

Article XI

New Mexico and Texas agree that upon the effective date of this Compact all controversies between said States relative to the quantity or quality of the water of the Rio Grande are composed and settled; however, nothing herein shall be interpreted to prevent recourse by a signatory state to the Supreme Court of the United States for redress should the character or quality of the water, at the point of delivery, be changed hereafter by one signatory State to the injury of another. Nothing herein shall be construed as an admission by any signatory state that the use of water for irrigation causes increase of salinity for which the user is responsible in law.

Article XII

To administer the provisions of this Compact there shall be constituted a Commission composed of one representative from each State, to be known as the Rio Grande Compact Commission. The State Engineer of Colorado shall be ex-officio the Rio Grande Compact Commissioner for Colorado. The State Engineer of New Mexico shall be ex-officio the Rio Grande Compact Commissioner for New Mexico. The Rio Grande Compact Commissioner for Texas shall be appointed by the Governor of Texas. The President of the United States shall be requested to designate a representative of the United States to sit with such Commission, and such representative of the United States, if so designated by the President, shall act as Chairman of the Commission without vote.

The salaries and personal expenses of the Rio Grande Compact Commissioners for the three States shall be paid by their respective States, and all other expenses incident to the administration of this Compact, not borne by the United States, shall be borne equally by the three States.

In addition to the powers and duties hereinbefore specifically conferred upon such Commission, and the members thereof, the jurisdiction of such Commission shall extend only to the collection, correlation and presentation of factual data and the maintenance of records having a bearing upon the administration of this Compact, and, by unanimous action, to the making of recommendations to the respective States upon matters connected with the administration of this Compact. In connection therewith, the Commission may employ such engineering and clerical aid as may be reasonably necessary within the limit of funds provided for that purpose by the respective States. Annual reports compiled for each calendar year shall be made by the Commission

and transmitted to the Governors of the signatory States on or before March first following the year covered by the report. The Commission may, by unanimous action, adopt rules and regulations consistent with the provisions of this Compact to govern their proceedings.

The findings of the Commission shall not be conclusive in any court or tribunal which may be called upon to interpret or enforce this Compact.

Article XIII

At the expiration of every five-year period after the effective date of this Compact, the Commission may, by unanimous consent, review any provisions hereof which are not substantive in character and which do not affect the basic principles upon which the Compact is founded, and shall meet for the consideration of such questions on the request of any member of the Commission; provided, however, that the provisions hereof shall remain in full force and effect until changed and amended within the intent of the Compact by unanimous action of the Commissioners, and until any changes in this Compact are ratified by the legislatures of the respective states and consented to by the Congress, in the same manner as this Compact is required to be ratified to become effective.

Article XIV

The schedules herein contained and the quantities of water herein allocated shall never be increased nor diminished by reason of any increase or diminution in the delivery or loss of water to Mexico.

Article XV

The physical and other conditions characteristic of the Rio Grande and peculiar to the territory drained and served thereby, and to the development thereof, have actuated this Compact and none of the signatory states admits that any provisions herein contained establishes any general principle or precedent applicable to other interstate streams.

Article XVI

Nothing in this Compact shall be construed as affecting the obligations of the United States of America to Mexico under existing treaties, or to the Indian Tribes, or as impairing the rights of the Indian Tribes.

Article XVII

This Compact shall become effective when ratified by the legislatures of each of the signatory states and consented to by

the Congress of the United States. Notice of ratification shall be given by the Governor of each state to the Governors of the other states and to the President of the United States, and the President of the United States is requested to give notice to the Governors of each of the signatory states of the consent of the Congress of the United States.

IN WITNESS WHEREOF, the Commissioners have signed this Compact in quadruplicate original, one of which shall be deposited in the archives of the Department of State of the United States of America and shall be deemed the authoritative original, and of which a duly certified copy shall be forwarded to the Governor of each of the signatory States.

Done at the City of Santa Fe, in the State of New Mexico, on the 18th day of March, in the year of our Lord, One Thousand Nine Hundred and Thirty-eight.

(Sgd.) M. C. HINDERLIDER.

(Sgd.) THOMAS M. McCLURE.

(Sgd.) FRANK B. CLAYTON.

APPROVED:

(Sgd.) S. O. HARPER.

ANALYSIS OF COMPACT

By

M. C. HINDERLIDER

The terms of the Rio Grande Compact accomplish two major purposes: First, they protect the present use of water in the various sections of the basin by setting up schedules of delivery of water at the Colorado-New Mexico stateline and at San Marcial, which is at the head of the Elephant Butte Reservoir, and by fixing the average annual releases from Elephant Butte Reservoir. Second, the terms of the Compact permit the construction and operation of additional reservoirs above Elephant Butte Reservoir to regulate the water that is being used at the present time, and to capture and make usable, for beneficial use in the Upper Rio Grande basin, water which otherwise would spill from Elephant Butte Reservoir and be lost.

The schedules of water deliveries are based upon the relation found to exist between the annual inflow into, and the outflow from, the San Luis Valley in Colorado for the years 1928 to 1937, both inclusive, and the relation between the flow at Otowi Bridge in northern New Mexico and the flow at San Marcial for all years of record prior to 1930 (pre Middle Rio Grande Conservancy period).

The Colorado-New Mexico stateline schedule is divided into two parts, one applying to the Conejos stream system and the

other to the Rio Grande proper. Required deliveries by the State of Colorado are taken as the sum of the required delivery by the Conejos system and by the Rio Grande proper, less ten thousand acre-feet. The separation of the stateline schedule into the two parts will permit the fixing of responsibility for any depletion, or the proper allocation of credits resulting from increased deliveries of water through future drainage developments.

Since the stateline schedules are based upon the relation between the inflow and outflow for the period 1928 to 1937, present uses of water in the San Luis Valley plus ten thousand acre-feet per year are recognized by the Compact. The use of water in some of the years of this period was the maximum in the history of irrigation in the Valley. Deliveries in exact accordance with schedules are not required on an annual basis. The Compact provides for a system of accounting whereby deviations from the deliveries required by the schedules are set up as debits or credits to the state making the deliveries. In other words, if more water flows across the Colorado-New Mexico stateline in any year than is required by the schedules, Colorado is credited with the surplus. If less water is delivered than required by the schedules, Colorado is debited with the deficiency. The credits and debits are allowed to accumulate subject to certain conditions.

Variations between the actual deliveries of water and the scheduled deliveries may result from two causes, or a combination of the two, the first of which is natural and the second of which may be caused by man. Natural variations may be due to variations in precipitation on the valley floor; unduly high or low run-off from the foothills areas in relation to the flow of the Rio Grande and the Conejos; or to a year of high run-off following one of extremely low run-off, which will tend to cause a high consumption in the Valley in that year.

In the case of Colorado, yearly or accumulated debit departures of as much as 100,000 acre-feet from the schedules of required deliveries, due to such natural causes, are allowable. The maximum annual and cumulative debit departure between the actual river flow in the past at the stateline, and the required deliveries under the schedules, has been less than 50,000 acre-feet. The allowable 100,000 acre-feet departure, therefore, is sufficient to protect Colorado against shortages, due to vagaries of nature, in meeting the required deliveries of water at the stateline. Deliveries of water in excess of those required by the schedules, through a bookkeeping system, may be applied to reduce debits, and in the absence of debits are allowed to accumulate as credits. Such credits may be reduced either by unusable spill from Elephant Butte Reservoir, or by departures on the debit side from deliveries as required by the schedules.

Man-induced departures between the actual flow of water at the stateline, and the flow required under the schedules, may

be due to the withholding of water in reservoirs, constructed after 1937, as a result of which debits will result; or they may be due to an increased flow brought about by additional drainage development or the release of water held over in reservoirs constructed after 1937, or both, in which case credits to the state will result. If debits are caused by the withholding of water from the stream in future reservoirs, such water is that which otherwise would have been stored in Elephant Butte Reservoir, unless Elephant Butte Reservoir were at such a stage that the water would have spilled had it not been stored in new upstream reservoirs.

The terms of the Compact, therefore, provide that debits may accumulate in any amount so long as an equivalent amount of water is held in storage in future reservoirs, provided, however, that any portion of the water so stored which otherwise would have spilled from Elephant Butte Reservoir, becomes the property of the owners of such reservoir or reservoirs.

Since Elephant Butte Reservoir will spill frequently during those periods when water will be available for storage in future reservoirs above Elephant Butte, and since such spills will eliminate all debits against Colorado and upper New Mexico, future reservoirs can operate freely under the terms of the Compact.

Conversely, deliveries of water in excess of the requirements under the schedules are credited to those areas making the same, so long as such excess deliveries remain in storage in Elephant Butte Reservoir. Such excess deliveries or credits are considered as floating on the top of Elephant Butte Reservoir, and if the stage of project water in storage in Elephant Butte Reservoir rises, causing a spill, the water which is then in the reservoir to the credit of the upper areas, is reduced by the amount of any spill which cannot be beneficially used below Elephant Butte Reservoir.

In order that the area above the latter reservoir shall have practically exclusive right to the consumption of the water which would otherwise spill from Elephant Butte Reservoir, the average annual release from that reservoir is fixed at 790,000 acre-feet, which includes 60,000 acre-feet required to be delivered to Mexico by the existing treaty. For the same reason, the storage capacity of Elephant Butte Reservoir is fixed at 2,638,860 acre-feet, the original capacity of this reservoir.

The following brief comments on each article of the Compact are intended for a clearer conception of the terms and provisions thereof.

Article I is descriptive of the compacting agencies and major terms as used in the Compact.

Article II provides for the establishment and maintenance of standard gaging stations at predetermined points along the

river, for collecting hydrographic data needful for a proper administration of the provisions of the Compact.

Article III sets up the schedules of relationship between the total water supply furnished by the Conejos and its tributaries, and the outflow to the Rio Grande, and also the relationship between the total water supply furnished by the Rio Grande at Del Norte and outflow at the stateline, less contributions from the Conejos River basin, as determined by conditions of inflow and outflow since 1928 (the former temporary compact provided that the conditions on the river should remain as of 1929), and makes provisions for correcting this relationship between inflow and outflow resulting from new depletions of inflow, or increase of inflow resulting from importation of water from the Colorado River basin.

While the obligation to meet the schedule of stateline deliveries rests upon the San Luis Valley as a whole, it is believed that a division of the obligation as between the Conejos and Rio Grande will better enable the water users to apportion among themselves their relative responsibilities in meeting the total obligations of Colorado.

The obligation of Colorado to deliver water, as set up by the Compact, is 10,000 acre-feet per annum less than the amount of water indicated by the tables of relationship between inflow and outflow.

This Article also permits Colorado to increase its consumptive uses of water out of the Rio Grande and Conejos Rivers to the extent that water may later be delivered at the stateline from the Closed Basin, and to the extent that the quality of water recovered from the Closed Basin is suitable for irrigation uses.

Article IV sets up the schedules of relationship between the total water supply furnished by the Rio Grande at Otowi, New Mexico, which is located 78 miles south of the Colorado-New Mexico stateline, and that furnished at San Marcial near the upper end of Elephant Butte Reservoir, and the obligation of New Mexico to make deliveries of water annually to the Elephant Butte Reservoir in accordance with such schedules, subject to certain provisions and adjustments resulting from changes in location of gaging stations, depletion of streamflow at Otowi after 1929, depletion of run-off during July, August and September from tributaries between Otowi and San Marcial by works constructed after 1937, and by virtue of transmountain diversions into the Rio Grande between the Colorado-New Mexico stateline and San Marcial.

Article V provides for the abandonment or changes in the location of gaging stations by the unanimous decision of the Rio Grande Compact Commission.

Article VI provides for certain allowable departures from the schedules of required deliveries of water by Colorado and

New Mexico in any calendar year. Such variation in any year by Colorado may amount to as much as 100,000 acre-feet, together with larger debits resulting from holdover storage, without violating Colorado's obligation to meet its schedule of deliveries at the stateline. This provision is necessary to permit future diversions in Colorado in any year by presently decreed appropriations in the San Luis Valley in substantially the same manner in which the diversions and uses have been made in past years. Colorado, however, must always retain in storage reservoirs sufficient water to repay any debits due from failure to meet the required schedule of stateline deliveries. It should be noted that this obligation applies only to reservoirs constructed after 1937, and in no way affects the rights of present reservoirs in Colorado to store water within the limits of their present decrees.

This Article also provides that Colorado or New Mexico may not accumulate annual credits in Elephant Butte Reservoir in excess of 150,000 acre-feet of water. This limitation is designed to prevent unsound expansion of development which otherwise might result from accumulations of large annual credits, and which also might reduce the available capacity of that reservoir to regulate the portion of the river flow to which the lands under the Elephant Butte project are rightfully entitled.

Paragraph six of Article VI provides that the Commissioners of the upper states, which have accrued credits in Elephant Butte Reservoir, may authorize any part of such credits to be used under the Elephant Butte project, if in their judgment failure to release such credits would result in "actual spill" from the Elephant Butte Reservoir. This would permit, at times, a greater use of water under that project for reduction of salinity in the lands, which, if not used, would pass over the spillway and be wasted down the river. It should be noted, however, that such releases of credit water belonging to an upper state are entirely optional with the Commissioner of the state holding such credits, and would not be agreed to unless, in his judgment, the stage of storage in Elephant Butte Reservoir at that time, or the prospect for an abnormally large run-off from the basin above, would definitely indicate that such credits would later be floated out over the spillway, or through the flood release valves of Elephant Butte Reservoir, of which no beneficial use could be made.

This Article also provides for reduction in the amount of credit water held in Elephant Butte storage, and debit water held in reservoirs in upper New Mexico and Colorado constructed after 1929, to compensate for losses due to evaporation.

Article VII prohibits increase in storage of water in reservoirs in Colorado and New Mexico constructed after 1929, whenever there is less than 400,000 acre-feet of usable water in storage in Elephant Butte Reservoir, provided, however, that, if the total releases of usable water from that reservoir since the effective

date of the Compact, or the last actual spill from the reservoir, have aggregated more than an average of 790,000 acre-feet per year, including required deliveries to Mexico, the time and amount of minimum storage in Elephant Butte Reservoir shall be adjusted for the excess deliveries.

Article VIII provides for the releases of water from storage reservoirs in Colorado and New Mexico constructed after 1929, to the extent of accrued debits against those states at "the greatest rate practicable under the conditions then prevailing," sufficient to bring the quantity of usable water in Elephant Butte storage to 600,000 acre-feet, and to insure a release from that reservoir of 790,000 acre-feet in such year.

This provision is to prevent shortage under the Elephant Butte Reservoir due to the withholding of water which would otherwise have been in storage in that reservoir. The terms of the provisions are such that the release of the water can be made at a rate to protect structures and property along the Conejos and Rio Grande against high stages of flow, and to insure that the releases of reservoir water may be made in such manner as not to encroach upon the stream channel capacity to the detriment of the use of such capacity by Colorado appropriators.

Article IX is a recognition of the right of the U. S. Government or New Mexico to make importations of water into the Upper Rio Grande Basin under conditions that will insure the protection of vested rights, present and future uses of water, and full development in the San Juan Basin in Colorado.

Article X assures to the state or governmental agency which makes an importation of water from the San Juan basin into the Upper Rio Grande Basin, the proper credit for such importation. This provision should be read in connection with subparagraph (c) of Article III.

Article XI is a most important declaration of principle with respect to the responsibility of an upper state, or citizen thereof, for the quality or character of the water flowing from an upper state into another state, and is designed for the protection of the interests of the upper state and its water users. It will be noted that there is now no question concerning the quality or character of the waters of the Upper Rio Grande Basin, but any state may at a later time raise this question in an action before the Supreme Court of the United States, should it decide that a change in quality or character of the waters in later years justifies such action.

Article XII sets up the machinery for the administration of the provisions of the Compact. The conception of the Commissioners and their advisers was that there should be as little interference as possible with the control by the duly accredited state authorities, and the present uses of water in each state, by the joint Commission for the administration of the Compact.

While it was recognized that the provisions of the Compact are not self-executing, and hence require some administration aside from the collection of hydrographic data, et cetera, it will be noted that any action taken by the Commission must be unanimous. This is designed to protect the rights of any one state against concerted action by a mere majority of the members of the Commission.

Article XIII makes provision for minor modifications of the provisions of the Compact which later years may show to be desirable. Such changes, however, cannot affect the fundamental provisions of the Compact, nor their operation, and may be made only by unanimous consent of the members of the Commission, and then are operative only when such unanimous action has been ratified by the Legislatures of the signatory states, and consented to by the Congress of the United States.

Article XIV is designed to protect Colorado and New Mexico against any increases in future uses of water by Mexico over and above the 60,000 acre-feet recognized by treaty. By the provisions of this Article, any decrease in uses of water by Mexico would be to the benefit of the water users under the Elephant Butte Reservoir.

Article XV is a declaration that the Compact is based solely upon the conditions peculiar to the Rio Grande Basin, and that any provisions therein contained do not establish any general principle or precedent applicable to other interstate streams.

Article XVI is a recognition on the part of the signatory states of the rights of Indian tribes and of the obligations of the United States to such tribes, and to the Republic of Mexico under existing treaties.

Article XVII provides that the Compact shall become effective when ratified by the Legislatures of the signatory states and consented to by the Congress of the United States.

CHAPTER XI

INTERSTATE COMPACT NEGOTIATIONS

Republican and Arickaree Rivers

No further attempt to negotiate a compact with Nebraska on these streams has been made since the Commissioner of that state advised that, due to lack of interest by its citizens as a result of the great floods of 1935 in the area affected, and to certain legal inhibitions, further negotiations appeared futile. It is believed, however, that the legal difficulties with which both states were formerly confronted, have been removed by the effect of the decision of the Supreme Court of the United States in the case of

Hinderlider v. The La Plata River and Cherry Creek Ditch Co. (58 Sup. Ct. Rep. 803), and that, in the interest of both states and their water users, it would seem advisable that negotiations for a compact be renewed.

CHAPTER XII

INTERSTATE RIVER SUITS

Arkansas River Suit

Taking of testimony in this second suit in the Supreme Court of the United States between Colorado and Kansas (206 U. S. 46) was practically concluded during the biennium, and it is probable that briefs will be prepared during 1939 and argument heard by the Court possibly within the year. In the meantime, it is believed that substantial progress has been made toward the settlement of this age old interstate controversy by the approval for construction of the Caddoa Reservoir by the federal government.

North Platte River Suit

A brief history of this interstate suit between Nebraska and Wyoming, in which Colorado is an impleaded defendant (295 U. S. 40) will be found in the biennial report of this Department for 1935-36. During this biennium, hearings before the Special Master were held for the taking of testimony in behalf of Nebraska and the United States, which had been permitted to intervene on the question of the asserted ownership by the government of all the unappropriated waters of the North Platte River, and also of the return waters from the government reclamation projects in Nebraska.

CHAPTER XIII

UNITED STATES SUPREME COURT DECISIONS

Laramie River

The second suit over the waters of this river (298 U. S. 573) was filed by Wyoming against Colorado on October 6, 1930. This suit involved the interpretation of the decree of the U. S. Supreme Court entered in the former suit. The decision of the court, announced June 1, 1936, sustained the contentions of Colorado, that the several amounts of water theretofore recognized by the Supreme Court in the former case as having rightfully been diverted out of the Laramie River by agencies in Colorado, are in the nature of a mass allocation to the State of Colorado, and not

to its individual water users, and that Colorado could rightfully administer such quantum under the provisions of its own laws without violating the interests of Wyoming, so long as such quantum, which the Court fixed at 39,750 acre-feet, was not exceeded.

The decision had the effect of discontinuing three small transmountain diversions out of the Laramie River to the Cache la Poudre River, which were not recognized in the former proceeding. Colorado contended that the words "divert and take" in the former decree, with reference to the meadowland ditches, meant a **consumptive** use and not headgate diversions. The Court held, however, that previous headgate diversions of these meadowland ditches resulted in a wasteful use of water; that the actual consumptive use of water on wild meadowlands in Colorado, which was found to amount to one acre-foot per acre actually irrigated, shall be measured at the headgates of the ditches.

Since the decision of the U. S. Supreme Court in June, 1936, negotiations have been going on between the officials of Colorado and Wyoming, with respect to the administration of the decree. In this connection, new measuring devices were installed in the Skyline, Laramie Poudre Tunnel, and Deadman Ditches, which divert water out of the Laramie River basin in Colorado to the Cache la Poudre River basin. Copies of all records of such diversions are furnished the State Engineer of Wyoming. By mutual agreement between the states, accurate measuring devices with automatic recorders were installed in seven representative meadowland ditches at the beginning of the irrigation season of 1937, to determine the amount of water actually diverted by those ditches. Records of diversions were duly furnished the State Engineer of Wyoming, who kept a deputy on the river throughout the period of diversions.

During the season of 1937, a deputy was employed by this office on the stream to assist the water commissioner and to supervise the installation of measuring devices.

As already stated, the decree of the U. S. Supreme Court in the second suit of Wyo. v. Colo. (298 U. S. 573) limited and confirmed Colorado's right in the river to 39,750 acre-feet per annum. The Court recognized the right of the three aforementioned transmountain diversions to take from the basin a total of 35,500 acre-feet annually and, as we interpret the decree, limits diversions out of the Laramie River and tributaries by the meadowland ditches to 4,250 acre-feet per year, which quantity is far less than that which has always been diverted by these ditches.

Recently a suit was filed by the representatives of most of these meadowland ditches against the transmountain diversion ditch owners and the water officials, in which the District Court of Larimer County, Colorado, was asked to issue an order directing the State Engineer of Colorado to administer the waters of

the Laramie River in conformity with Colorado court decrees in cubic feet per second of time, without regard to the decree of the U. S. Supreme Court limiting such diversions to a total of 4,250, measured at the headgates of such ditches. The decision of the District Court sustained the plaintiff and directed the State Engineer to so administer the decrees of the meadowland and transmountain ditches in their relative orders of priority. The District Court held that any unnecessary returns to the stream of diverted water shall be deemed waste which the decree enjoins.

Orders have been issued by the State Engineer to the owners of all the meadowland ditches to install proper headgates and measuring devices prior to any diversions by these ditches in 1939, in an earnest attempt to meet the requirements of the Court.

La Plata River

What is probably the most momentous decision affecting the water resources of this state was rendered by the Supreme Court of the United States on April 25, 1938, in the noted case of *Hinderlider v. The La Plata River and Cherry Creek Ditch Co.* (58 Sup. Ct. Rep. 803).

Colorado has been the pioneer among the western states in the movement to settle disputes between states over the waters of interstate streams by the compact method. The La Plata River Compact was the first attempt to invoke such principle. Following the first few years of administration of this Compact, the La Plata River and Cherry Creek Ditch Company, which owns Colorado priority No. 6 in the La Plata River for 41.5 second-feet, brought suit in the District Court for La Plata County to enjoin the water officials of Colorado from closing its headgate when the waters of the stream were being turned down to satisfy needs in New Mexico under the rotation provisions of the Compact.

This case had been tried in the District Court of Colorado twice; had been heard twice by the Supreme Court of the state which had over-ruled the former decision of the lower court, and had likewise twice been appealed to the Supreme Court of the United States.

The case involved the right of states, irrespective of the effects upon the decreed water rights of an appropriator, to enter into compacts providing for the equitable division of the waters of an interstate stream. The Supreme Court of our state had reversed the decision of the District Court upholding the actions of the water officials in their administration of the La Plata Compact, on the theory that a vested property right of the plaintiff ditch company had been taken without due process of law, and without just compensation, contrary to the provisions of the state and federal constitutions. (*La Plata River and Cherry Creek Ditch Co. v. Hinderlider, et al.*, 93 Colo. 128.)

Among other declarations, the Court stated, "It (the Compact) is a mere compromise of presumably conflicting claims, a trading therein, in which the property of citizens is bartered without notice or hearing, and with no regard to vested rights."

For their defense, the state water officials had taken the position that the equitable apportionment which had been effected by the La Plata Compact, determined the limit of the water to which Colorado and its citizens were entitled, and that the title of any water users in Colorado was necessarily limited by the rights of New Mexico. In other words, it was contended by the water officials that no vested right of any Colorado water user was invaded when New Mexico received only the amount of water to which she was entitled by the terms of the Compact, which presumed to, and did, equitably divide the waters of the La Plata River between the two states. Of necessity, water delivered to New Mexico under the terms of the Compact was water which no Colorado appropriator might acquire under a decree from a Colorado court.

The ditch company contended, and the Supreme Court of Colorado took the position that the entry of a decree in a water adjudication proceeding by a Colorado court vested in the claimant a property right which could only be taken away after an action in court with payment of just compensation therefor.

The U. S. Supreme Court held that no property of the plaintiff ditch company had been taken, and no vested right had been violated.

Mr. Justice Brandeis said: "As Colorado possessed the right only to an equitable share of the water in the stream, the decree of January 12, 1898, in the Colorado water proceeding did not award to the ditch company any right greater than the equitable share. Hence the apportionment made by the compact cannot have taken from the ditch company any vested right unless there was in the proceedings leading up to the compact, or in its application, some vitiating infirmity. No such infirmity or illegality has been shown."

CHAPTER XIV

STATE WATER CONSERVATION PROGRAM AND INVESTIGATIONS

In 1935, a definite and comprehensive state program of water conservation was prepared by this Department and the State Planning Commission. This plan, which envisaged the greatest possible use of the surplus water supplies arising in the state, and the regulation of present uses in the interest of greater efficiency and economy, involved the construction of numerous storage

reservoirs, transmountain tunnels, canals, and related works, including the development of power. This comprehensive plan was presented to the President and other federal authorities in Washington in 1935. Thereafter, the U. S. Bureau of Reclamation was requested and authorized to include in its program of investigations in the Colorado River basin, under the provisions of Sec. 15 of the Boulder Canon Project Act, all the water conservation projects which had theretofore been sponsored by the aforementioned state agencies.

Investigations of these projects have been carried on by the Bureau of Reclamation during the past three years. At the end of 1938, the Bureau had practically completed its studies on land classification in the Colorado River basin in this state, and had issued reports covering irrigated and arable areas, water supplies and estimated costs for developing the following projects, all of which are designed primarily for furnishing supplemental water supplies for old irrigated regions:

Colorado River Basin

West Divide Creek Project
Plateau Creek Project
Rifle Creek Project
Troublesome Creek Project
Colo.-Big Thimpson Project
Yampa River Project
Pine River Project
Mancos River Project
La Plata River Project
Florida-Mesa Project
North Fork Gunnison Project

In addition to the foregoing the Bureau of Reclamation completed investigations and reports on the following water conservation and flood control projects in eastern Colorado:

Blue River-Clear Creek Project
Cherry Creek Valley Project
Hugo-Chivington Project
Republican River Project
Purgatoire River Project

and partially completed investigations on the Apishapa, Huerfano, and Cucharas River projects.

To the foregoing, should be added the Wagon Wheel Gap and Conejos River projects in the San Luis Valley, which investigations were conducted by the Bureau of Reclamation in collaboration with the Rio Grande Joint Investigation.

Under the provisions of the Omnibus Flood Control Act and amendments thereto, the Corps of U. S. Engineers has been conducting investigations and studies looking to flood control measures on the Republican, Arickaree, Apishapa, Purgatoire, Fountain, Arkansas, and the Rio Grande and Conejos Rivers. It is anticipated that similar studies will be extended to cover several tributaries of the South Platte, as mentioned elsewhere in this report under the subject "Disastrous Floods," and possibly to several streams in the western part of the state. Of the aforementioned projects which have been investigated, federal funds have been allocated for the construction of the following projects:

North Fork Gunnison Project

Colo.-Big Thompson Project

Pine River Project

Yampa River Project

In addition, loans and grants have been made available by the PWA for the construction of the 23,000-acre-foot Groundhog Reservoir, a \$300,000 project for the Montezuma Valley Public Irrigation District, and about \$200,000 to the Yampa Reservoir Public Irrigation District for construction of the 6,000-acre-foot Stillwater Reservoir on Yampa River, both of which are in western Colorado.

Since its organization in 1937, the Colorado Water Conservation Board has been cooperating in the promotion of these projects.

North Platte River Investigations

In the spring of 1937, this Department initiated and carried out during the summer extensive engineering investigations and studies in North Park, to determine the resources and needs of that basin and in preparation of Colorado's defense in the pending interstate suit. In this connection, an aerial survey and map of North Park was made in cooperation with the U. S. Forestry Department. In addition, extensive studies were conducted on selected areas to determine headgate diversions and consumptive uses of water, and several projects of vital interest to that area were surveyed and studied. This work was continued during the season of 1938 by the Colorado Water Conservation Board.

CHAPTER XV

DESCRIPTIONS OF
STREAM GAGING STATIONS
AND
TABLES OF STREAM DISCHARGES

All stream gaging stations in this state are maintained by the State Engineer of Colorado in cooperation with the United States Geological Survey.

The majority of the stream measurements in the Colorado River and North Platte River basins were made by the U. S. G. S. while all work in the Arkansas, Rio Grande and South Platte River basins was done by the State Engineer's office.

The following agencies also cooperated with the State Engineer in this work:

State of Nebraska

State of New Mexico

U. S. Bureau of Reclamation

U. S. Army Engineers

U. S. Forest Service

Municipalities of Denver, Loveland, Grand Junction

Arkansas Valley Ditch Association

Rio Grande Water Users Association

Uncompahgre Valley Water Users Association

Del Norte, Terrace and Trinchera Irrigation Districts

Costilla Estates Development Company

Public Service Company of Colorado

Western Colorado Power Company

RELATED RUNOFF IN PERCENTAGE OF THE NORMAL FOR STREAMS IN COLORADO

Stream	Years of Record	Mean Ac. Ft.	1937 %	1938 %
Animas River at Durango.....	40	709,570	82	107.6
Arkansas River at Canon City.....	51	530,030	77	95
Bear Creek at Morrison.....	19	42,508	69	163
Big Thompson River Below Power House near Drake.....	10	117,221	103	138
Blue River at Dillon.....	28	88,950	63	98
Boulder Creek near Orodell.....	32	69,720	78	113
Cache la Poudre River at Canon.....	55	310,850	72	116
Clear Creek near Golden.....	29	180,630	83	134
Colorado River at Glenwood Springs.....	39	2,195,030	67	111
Conejos River near Mogote.....	36	277,290	116	113
Dolores River at Dolores.....	29	323,220	122	132
†Fraser River at West Portal.....	28	31,914	76	106
La Plata River at Hesperus.....	24	35,209	106	112
Laramie River near Jelm, Wyoming.....	30	126,440	67	111
Little Snake River at Lily Park.....	18	480,140	105	100
North Platte River near Northgate.....	25	370,160	58	108
Purgatoire River at Trinidad.....	31	67,800	102	91
Rio Grande River near Del Norte.....	49	701,520	82	113
†Roaring Fork River at Glenwood Springs..	32	1,118,940	74	111
Saguache Creek near Saguache.....	29	56,930	73	102
South Boulder Creek at Eldorado Springs..	46	56,142	86	146
*South Platte River at South Platte.....	47	258,610	58	133
St. Vrain Creek at Lyons.....	49	99,663	75	114
White River near Meeker.....	35	467,930	71	106
White River near Watson, Utah.....	17	566,890	69	106
Yampa River at Steamboat Springs.....	33	357,270	65	105
Yampa River near Maybell.....	28	1,223,560	77	100.4
State Average.....			81	114

NOTE—The mean in acre feet is based on all available years of record as shown in first column, including the year 1938.

*Corrected for storage.

†Corrected for transmountain diversion.

PLATTE RIVER DRAINAGE

SOUTH PLATTE RIVER NEAR LAKE GEORGE, COLORADO

Location—Water stage recorder in NW¼ Sec. 21, T. 13 S., R. 72 W., 1½ miles below Eleven Mile Canon Reservoir and 8 miles above Lake George.

Drainage Area—929 square miles. Zero of gage is 8,423.95 feet above mean sea level.

Records Available—October 1, 1929, to September 30, 1938. Station located at Lake George, 8 miles downstream, from October, 1910 to September, 1929.

Maximum discharge observed during period 1930-38; 990 second feet, August 15, 1930. Gage height 4.80 feet.

Maximum Discharge—Year 1937; 267 second feet, May 26, 1937. Gage height 2.38 feet.

Maximum Discharge—Year 1938; 624 second feet, September 3, 1938. Gage height 3.63 feet.

Accuracy—Records considered excellent.

Diversions for storage and irrigation above station. Flow regulated by Antero and Eleven Mile Canon Reservoirs; capacity 33,000 and 80,000 acre-feet, respectively.

SOUTH PLATTE RIVER ABOVE LAKE CHEESMAN, COLORADO

Location—Water stage recorder in Sec. 22, T. 10 S., R. 71 W., at weir ½ mile above highwater line of Lake Cheesman.

Drainage Area—1,680 square miles. Zero of gage is 6,845.86 feet above mean sea level.

Records Available—October 1, 1924, to September 30, 1938.

Maximum discharge observed during period 1924-38; 3030 second feet, August 6, 1936. Gage height 5.30 feet.

Maximum Discharge—Year 1937; 572 second feet, June 27, 1937. Gage height 2.26 feet.

Maximum Discharge—Year 1938; 985 second feet, August 28, 1938. Gage height 2.85 feet.

Accuracy—Records considered excellent except those for October 13-16, November 14-30, 1936; April 1-9, June 2-4, June 28, July 2, 1937; July 14-16, September 28, 1938, which were estimated and are fair. No record December 1, 1936, to March 31, 1937, and from November 13, 1937, to March 24, 1938.

Diversions for storage and irrigation above station. Flow regulated by two reservoirs above station; total capacity of 115,000 acre-feet.

SOUTH PLATTE RIVER BELOW LAKE CHEESMAN, COLORADO

Location—Water stage recorder in Sec. 6, T. 10 S., R. 20 W., $\frac{1}{4}$ mile below Lake Cheesman.

Drainage Area—1,766 square miles. Zero of gage is 6,610.38 feet above mean sea level.

Records Available—October 1, 1924, to September 30, 1938. Acre-foot estimates 1909 to date.

Maximum discharge observed during period 1924-38; 1630 second feet, June 25, 1936. Gage height 6.40 feet.

Maximum Discharge—Year 1937; 932 second feet, June 28, 1937. Gage height 4.98 feet.

Maximum Discharge—Year 1938; 932 second feet, August 29, 1938. Gage height 5.13 feet.

Accuracy—Records considered good except those for December 19, 1936, to March 5, 1937, which were estimated on basis of 2 discharge measurements and discharge records at reservoir, and those for December 26, 1937, to March 20, 1938, which were computed on basis of 2 discharge measurements, and discharge records of reservoir, and are fair.

Diversions for storage and irrigation above station. Flow regulated by three reservoirs, total capacity 194,000 acre-feet.

NORTH FORK OF SOUTH PLATTE RIVER AT SOUTH PLATTE, COLORADO

Location—Water stage recorder in Sec. 25, T. 7 S., R. 70 W., one-third of a mile above South Platte.

Drainage Area—484 square miles. Zero of gage is 6,090.55 feet above mean sea level.

Records Available—January 4, 1909, to September 30, 1910; April 1, 1913, to September 30, 1938.

Maximum discharge observed during period 1909-38; 1910 second feet, June 8, 1921. Gage height 5.90 feet.

Maximum Discharge—Year 1937; 715 second feet, June 27, 1937. Gage height 4.08 feet.

Maximum Discharge—Year 1938; 800 second feet, June 23, 1938. Gage height 4.33 feet.

Accuracy—Records considered good. Records for period of ice effect November 28, 1936, to March 13, 1937, were computed on basis of 4 discharge measurements and temperature records, and those for period of ice effect November 21, 1937, to March 25, 1938, and for period of missing gage heights May 20 to June 10, June 24-30, July 16 to August 2, 1938, were computed on above basis, and are fair.

Diversions for irrigation above station.

SOUTH PLATTE RIVER AT SOUTH PLATTE, COLORADO

Location—Water stage recorder in Sec. 25, T. 7 S., R. 70 W., at South Platte, 375 feet below mouth of North Fork of South Platte River.

Drainage Area—2,550 square miles. Zero of gage is 6,078.46 feet above mean sea level.

Records Available—March 28, 1902, to September 30, 1938.

Maximum discharge observed during period 1902-38; 6320 second feet, June 7, 1921. Gage height 8.95 feet.

Maximum Discharge—Year 1937; 1260 second feet, June 28, 1937. Gage height 4.05 feet.

Maximum Discharge—Year 1938; 1630 second feet, May 30, 1938. Gage height 4.50 feet.

Accuracy—Records considered good. Discharge October 11-22, October 30 to November 6, 1936, and for period of ice effect from November 24, 1936, to April 10, 1937, and those for period from November 15, 1937, to March 24, 1938, and March 31 to April 8, 1938, computed on basis of 4 discharge measurements and comparison with North Fork and Waterton stations, measurements and records for station below Cheesman Reservoir, plus estimated inflow.

Diversions for irrigation above station. Flow regulated by three reservoirs, capacity 194,000 acre-feet.

SOUTH PLATTE RIVER AT WATERTON, COLORADO

Location—Water stage recorder in Sec. 34, T. 6 S., R. 69 W., 200 feet east of highway bridge at pipe line crossing from Platte Canon Reservoir to filter beds and one-half mile south of Waterton.

Nearest Tributary—Waste from Platte Canon Reservoir enters immediately above station.

Drainage Area—2,621 square miles. Zero of gage is 5,484.44 feet above mean sea level.

Records Available—May 1, 1926, to September 30, 1938.

Maximum discharge observed during period 1926-38; 2670 second feet, August 12, 1936. Gage height 3.10 feet.

Maximum Discharge—Year 1937; 888 second feet, May 16, 1937. Gage height 1.92 feet.

Maximum Discharge—Year 1938; 1620 second feet, September 3, 1938. Gage height 2.45 feet.

Accuracy—Records good except those for period of missing gage heights, and ice effect November 3-5, 1936; January 1, 2, 7-10 to February 21, 1937, which were estimated, and are fair.

Diversions for irrigation above station. Flow regulated by three storage reservoirs above station; capacity 194,000 acre-feet.

SOUTH PLATTE RIVER AT DENVER, COLORADO

Location—Water stage recorder at 19th Street Bridge in Denver, $\frac{1}{4}$ mile below mouth of Cherry Creek. Waste water from Farmers and Gardners Ditch enters river above station.

Drainage Area—3,840 square miles. Zero of gage is 5,162.16 feet above mean sea level.

Records Available—May 7, 1895, to September 30, 1938. Station maintained between 15th and 16th Street bridges prior to August 29, 1931. Records comparable.

Maximum discharge observed during period 1902-38; 22,000 second feet, September 10, 1933. Gage height 10.98 feet.

Maximum Discharge—Year 1937; 5280 second feet, June 1, 1937. Gage height 5.35 feet.

Maximum Discharge—Year 1938; 5870 second feet, August 28, 1938. Gage height 5.60 feet.

Accuracy—Records considered good except those for periods of ice effect January 7-15, January 19 to February 4, 9, 10, 1937, which were computed on basis of 1 discharge measurement and weather records, and those estimated for period of missing gage heights March 1-21, 1937, which are fair. Records excellent for 1938.

Diversions for irrigation above station.

SOUTH PLATTE RIVER AT HENDERSON, COLORADO

Location—Water stage recorder in Sec. 34, T. 1 S., R. 67 W., $\frac{1}{4}$ mile west of Henderson and just below highway bridge.

Drainage Area—4,740 square miles. Altitude, 5,000 feet above mean sea level.

Records Available—May 1, 1926, to September 30, 1938.

Maximum discharge observed during period 1926-38; 5,600 second feet, September 10, 1933. Gage height 7.15 feet.

Maximum Discharge—Year 1937; 3,200 second feet, June 2, 1937. Gage height 5.20 feet.

Maximum Discharge—Year 1938; 4,480 second feet, May 30, 1938. Gage height 6.16 feet.

Accuracy—Records considered good except those for ice effect period December 27, 1936, to February 12, 1937, which were computed on basis of 2 discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

SOUTH PLATTE RIVER AT FORT LUPTON, COLORADO

Location—Water stage recorder in Sec. 6, T. 1 N., R. 66 W., at west edge of Fort Lupton and 600 feet above highway bridge. Prior to June 20, 1935, water stage recorder a quarter of a mile downstream at different datum.

Drainage Area—5,070 square miles. Altitude, 4,900 feet above mean sea level.

Records Available—May 10 to September 15, 1906; April 29, 1929, to September 30, 1938.

Maximum discharge observed during period 1906; 1929-38; 4,150 second feet, September 11, 1933. Gage height 5.80 feet.

Maximum Discharge—Year 1937; 2,680 second feet, June 2, 1937. Gage height 3.40 feet.

Maximum Discharge—Year 1938; 4,220 second feet, September 4, 1938. Gage height 4.88 feet.

Accuracy—Records considered good except those for period of ice effect, December 27, 1936, to February 8, 1937, which were computed on basis of one discharge measurement and weather records, and are fair.

Diversions for irrigation above station.

SOUTH PLATTE RIVER NEAR KERSEY, COLORADO

Location—Water stage recorder in Sec. 9, T. 5 N., R. 64 W., at highway bridge $13\frac{1}{4}$ miles north of Kersey. Cache la Poudre River enters 2.5 miles above station.

Drainage Area—9,500 square miles. Altitude, 4,600 feet above mean sea level.

Records Available—April 27, 1901, to October 31, 1903; March 1, 1905, to November 20, 1912; January 1, 1914, to September 30, 1938.

Maximum discharge observed during period 1901-3; 1905-38; 31,000 second feet, June 7, 1921.

Maximum Discharge—Year 1937; 2,140 second feet, June 28, 1937. Gage height 5.47 feet.

Maximum Discharge—Year 1938; 18,500 second feet, September 4, 1938. Gage height 9.73 feet.

Accuracy—Records considered good except those for period of ice effect from January 3 to February 8, 1937, which were computed on basis of one discharge measurement and weather records, and are fair.

Diversions for irrigation above station.

SOUTH PLATTE RIVER AT SUBLETTE, COLORADO

Location—Water stage recorder in Sec. 14, T. 4 N., R. 61 W., just below highway bridge 1,000 feet south of Sublette.

Drainage Area—12,900 square miles.

Records Available—April 19, 1926, to September 30, 1938.

Maximum discharge observed during period 1926-38; 8,090 second feet, April 23, 1926. Gage height 5.80 feet. Highest discharge known about 30,000 second feet June 7, 1921.

Maximum Discharge—Year 1937; 2,140 second feet, June 28, 1937. Gage height 4.44 feet.

Maximum Discharge—Year 1938; 10,660 second feet, September 5, 1938. Gage height 8.78 feet.

Accuracy—Records considered good except those for May 20, 21, 1937, which were estimated, and are fair. Discharge for January 9-12, March 20-26, 1937, computed on basis of range in stage on recorder chart. For period from December 13-17, 19-24, 1937, and January 9-12, 1938; February 1-4, 16-18, April 5-8 and September 5-8 discharge was estimated by comparison with South Platte at Kersey and diversions and weather records, and are fair.

Diversions for storage and irrigation above station.

SOUTH PLATTE RIVER AT BALZAC, COLORADO

Location—Water stage recorder in Sec. 13, T. 5 N., R. 55 W., at Balzac siding $1\frac{1}{4}$ miles northeast of Union. Two recording gages on two channels.

Drainage Area—17,700 square miles. Altitude, 4,090 feet above mean sea level.

Records Available—January, 1917, to September 30, 1938.

Maximum discharge observed during period 1917-38; May 31, 1935. Gage height 11.43 feet; discharge not determined.

Maximum Discharge—Year 1937; 1,830 second feet, May 26, 1937.

Maximum Discharge—Year 1938; 15,650 second feet, September 8, 1938. Gage height 8.45 feet.

Accuracy—Records considered good for year 1937 except those for period of ice effect, January 8 to February 4, 1937, which were computed on basis of one discharge measurement and weather records, and are fair. Records fair for 1938. During period of ice effect and missing gage heights discharge computed by comparison with record on other channel.

Diversions for storage and irrigation above station.

SOUTH PLATTE RIVER AT JULESBURG, COLORADO

Location—Water stage recorder in Sec. 33, T. 12 N., R. 44 W., at highway bridge one-half mile east of Julesburg, Colorado, and four miles above the Colorado-Nebraska State Line. (Three water stage recorders.)

Drainage Area—20,600 square miles. Altitude, 3,469 feet above mean sea level.

Records Available—April 2, 1902, to November 16, 1906; May 12, 1908, to November 30, 1912; April 8, 1914, to September 30, 1938.

Maximum discharge observed during period 1902-06; 1908-12; 1914-38; 31,300 second feet, June 2, 1935.

Maximum Discharge—Year 1937; 642 second feet, February 14, 1937.

Maximum Discharge—Year 1938; 7,980 second feet, September 10, 1938.

Accuracy—Records considered good. They represent flow passing Colorado-Nebraska State Line.

Diversions for irrigation above station.

TARRYALL CREEK NEAR LAKE GEORGE, COLORADO

Location—Water stage recorder in Sec. 22, T. 11 S., R. 72 W., at McLaughlin's ranch eight miles northwest of Lake George, and approximately five miles above the mouth. Cowhead Creek enters from south approximately one mile above.

Drainage Area—460 square miles.

Records Available—October, 1910, to June, 1912; June 19 to October 26, 1916; April 1, 1925, to September 30, 1938.

Maximum discharge observed during period 1910-12, 1916, 1925-38; 643 second feet, July 31, 1935. Gage height 5.20 feet.

Maximum Discharge—Year 1937; 480 second feet, June 27, 1937. Gage height 4.11 feet.

Maximum Discharge—Year 1938; 383 second feet, September 4, 1938. Gage height 3.51 feet.

Accuracy—Records considered excellent except those for October 22-24, November 3-5, 12-18, 1936, and those for April 1-15, May 27-31, 1938, which were estimated, and are fair.

Diversions for irrigation above station.

GOOSE CREEK ABOVE LAKE CHEESMAN, COLORADO

Location—Water stage recorder in Sec. 3, T. 10 S., R. 71 W., one mile above high-water line of Lake Cheesman. Sharp crested weir.

Drainage Area—86 square miles. Altitude, 6,835 feet above mean sea level.

Records Available—October, 1924, to September 30, 1938. Acre-foot estimates 1909 to date.

Maximum discharge observed during period 1924-38; 315 second feet, May 26, 1926. Gage height 3.75 feet.

Maximum Discharge—Year 1937; 126 second feet, June 26, 1937. Gage height 2.40 feet.

Maximum Discharge—Year 1938; 217 second feet, May 29, 1938. Gage height 2.98 feet.

Accuracy—Records considered excellent except those for April 1-9, 1937, and November 13, 1937, March 29 to April 2, and April 16, 17, June 25 to July 2, 1938, which were estimated, and are fair.

BEAR CREEK AT MORRISON, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 35, T. 4 S., R. 70 W., just above main Turkey Creek Canon highway bridge, at Morrison. From October, 1919, to September, 1934, water stage recorder at Idledale, three miles above; records comparable.

Nearest Tributary—Mount Vernon Creek enters one-quarter mile below.

Drainage Area—165 square miles.

Records Available—April, 1888, to September, 1891, May, 1895, to March, 1902, October, 1919, to September 30, 1938.

Maximum discharge observed during period 1888-91, 1895-1902, 1919-38; 8,600 second feet (estimated) July 24, 1896.

Maximum Discharge—Year 1937; 392 second feet, August 30, 1937. Gage height 1.98 feet.

Maximum Discharge—Year 1938; 6,200 second feet, September 2, 1938. Gage height 9.20 feet.

Accuracy—Records considered good except for period of ice effect December 23, 1936, to February 22, 1937, and December 8-12, 18, 1937, to January 10, 1938, January 24-29, February 15, 17-26, which were computed on basis of discharge measurements and weather records, and are fair. Discharge estimated September 2-9, 11-13, 1938, on basis daily observations.

Small diversions for irrigation above station.

BEAR CREEK AT MOUTH AT SHERIDAN JUNCTION,
COLORADO

Location—Water stage recorder in Sec. 5, T. 5 S., R. 68 W., one-half mile southwest of Sheridan Junction and three fourths mile above mouth.

Drainage Area—265 square miles. (Revised.)

Records Available—April 1 to November 30, 1914; February 23, 1927, to September 30, 1938.

Maximum discharge observed during period 1914, 1927-38; 3,000 second feet, (slope measurement) July 7, 1933. Gage height 6.95 feet.

Maximum Discharge—Year 1937; 222 second feet, June 2, 1937. Gage height 3.43 feet.

Maximum Discharge—Year 1938; 2,810 second feet, September 2, 1938. Gage height 7.21 feet.

Accuracy—Records considered fair in 1937 and good in 1938, except for periods of ice effect December 30, 1936, to February 12, 1937, November 16-20, December 9-11, 1937, January 6-8, 1938, and February 16-19, which were computed on basis of discharge measurements and weather records, and are fair.

Diversions for storage and irrigation above station.

CLEAR CREEK NEAR GOLDEN, COLORADO

Location—Water stage recorder in Sec. 32, T. 3 S., R. 70 W., $1\frac{1}{2}$ miles above Golden. Welch Ditch diverts water above station.

Nearest Tributary—Beaver Creek enters from south, approximately three miles upstream.

Drainage Area—392 square miles. Altitude, 5,620 feet above mean sea level.

Records Available—December 4, 1908, to December 31, 1909; June to September, 1911; January 26, 1912, to September 30, 1938.

Maximum discharge observed during period 1908-09, 1911-38; 5,890 second feet, September 9, 1933, by slope area method. Gage height 7.97 feet. Maximum discharge known, 8,700 second feet August 1, 1888.

Maximum Discharge—Year 1937; 1,750 second feet, June 26, 1937. Gage height 2.72 feet.

Maximum Discharge—Year 1938; 4,090 second feet, September 2, 1938. Gage height 4.57 feet.

Accuracy—Records considered good except those for periods missing gage heights and ice effect November 14-28, December 1, 1936, to March 9, 1937, December 19, 1937, to March 20, 1938, which were computed on basis of 4 and 3 discharge measurements respectively, and weather records, and are fair.

Diversions for irrigation above station.

CLEAR CREEK AT MOUTH NEAR DERBY, COLORADO

Location—Water stage recorder in Sec. 36, T. 2 S., R. 68 W., $\frac{3}{4}$ mile above mouth and $2\frac{1}{4}$ miles west of Derby. Prior to September 24, 1936, recorder 150 feet upstream at 2.43 feet higher datum. Station moved up and down creek not over 700 feet distance due to conditions caused by gravel dredging near station.

Drainage Area—600 square miles.

Records Available—April 1, 1914, to November 30, 1914, February 25, 1927, to September 30, 1938.

Maximum discharge observed during period 1914, 1927-38; 3,650 second feet, May 30, 1938. Gage height 4.04 feet.

Maximum Discharge—Year 1937; 2,170 second feet, June 26, 1937. Gage height 4.49 feet.

Maximum Discharge—Year 1938; 3,650 second feet, May 30, 1938. Gage height 4.04 feet.

Accuracy—Records considered poor. Discharge for ice effect period December 8, 1936, to February 28, 1937, computed on basis 3 discharge measurements. Period from September 15 to October 16, 1937, estimated on basis 1 discharge measurement, and from February 22-25, April 29 to May 2, June 8-12, and July 23-31, 1938, estimated.

Diversions for irrigation above station.

FALL RIVER NEAR IDAHO SPRINGS, COLORADO

Location—Water stage recorder in Sec. 28, T. 3 S., R. 73 W., at mouth, $1\frac{1}{2}$ miles west of Idaho Springs. Gage moved 400 feet upstream July 7, 1937.

Drainage Area—23.6 square miles. Altitude, 7,720 feet above mean sea level.

Records Available—April 1, 1930, to September 30, 1938. (Discontinued.)

Maximum discharge observed during period 1930-38; 325 second feet June 29, 1938. Gage height 2.08 feet.

Maximum Discharge—Year 1937; 221 second feet, July 27, 1937. Gage height 1.79 feet.

Maximum Discharge—Year 1938; 325 second feet, June 29, 1938. Gage height 2.08 feet.

Accuracy—Records considered good except for period of missing gage heights June 13-18, 27 to July 6, August 21-24, 1937, and for estimated discharge November 18-24, 27-30, 1937, and March 1 to 16, 1938, April 15 to 18, which are fair.

Diversions for storage above station, and flow regulated by storage.

SOUTH BOULDER CREEK NEAR ELDORADO SPRINGS,
COLORADO

Location—Water stage recorder in Sec. 26, T. 1 S., R. 71 W., $1\frac{1}{4}$ miles west of Eldorado Springs and 1 mile above Community Dam.

Drainage Area—114 square miles.

Records Available—May 15, 1895, to September 30, 1901; July 1, 1904, to September 30, 1938. Station maintained at Marshall 4 miles below, from 1895-1901, and at Eldorado Springs 1904-29. All records were corrected for diversions before publishing, making them comparable.

Maximum discharge observed during period 1888-92, 1895-1901, 1904-1938; 7,390 second feet, September 2, 1938. Gage height 9.24 feet.

Maximum Discharge—Year 1937; 1,060 second feet, June 26, 1937. Gage height 4.12 feet.

Maximum Discharge—Year 1938; 7,390 second feet, September 2, 1938. Gage height 9.24 feet.

Accuracy—Records considered excellent in 1937, and good in 1938, except those for periods of ice effect, November 25, 1936, to March 21, 1937, and November 24, 1937, to April 1, 1938, which were computed on basis of 3 discharge measurements, respectively, and weather records, and are fair. Discharge estimated September 3-7, 1938.

Diversions for irrigation above station. Water from Moffat Tunnel Trans-Mountain diversion diverted approximately $1\frac{1}{2}$ miles above station. Some of this water passes station. See Fraser River station at West Portal for amounts diverted from Colorado River basin into this drainage basin.

MIDDLE BOULDER CREEK, AT NEDERLAND, COLORADO

Location—Water stage recorder in Sec. 13, T. 1 S., R. 73 W., at inlet to Barker Meadow Reservoir below mouth of North Beaver Creek, and just east of Nederland. (Sharp crested weir.)

Drainage Area—38 square miles. Altitude, 8,180 feet above mean sea level.

Records Available—January, 1908, to September 30, 1938.

Complete records furnished by Public Service Company of Colorado.

BOULDER CREEK NEAR ORODELL, COLORADO

Location—Water stage recorder in Sec. 34, T. 1 N., R. 71 W., $\frac{1}{4}$ mile below Public Service Power House, and 1 mile above old Orodell.

Nearest Tributary—Four Mile Creek enters from north, 1 mile below station.

Drainage Area—105 square miles. Altitude, 5,800 feet above mean sea level.

Records Available—August, 1887, to October, 1888; March, 1907, to December, 1914; February, 1916, to September 30, 1938. Prior to 1917, station maintained just above mouth of Four Mile Creek, 1 mile downstream.

Maximum discharge observed during period 1887-88, 1907-14, 1916-1938; 2,500 second feet, June 6, 1921. Gage height 4.31 feet.

Maximum Discharge—Year 1937; 455 second feet, June 25, 1937. Gage height 3.10 feet.

Maximum Discharge—Year 1938; 802 second feet, June 22, 1938. Gage height 3.53 feet.

Accuracy—Records considered excellent except those for period of ice effect January 2 to February 3, and those for August 28-30, 1937, which were estimated, and are fair.

Diversions for storage above station. Flow regulated by Barker Meadow Reservoir, capacity 11,500 acre feet. Low water flow regulated by operation of power plant $\frac{1}{4}$ mile above station.

BOULDER CREEK AT MOUTH NEAR LONGMONT, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 17, T. 2 N., R. 68 W., $\frac{1}{4}$ mile below highway bridge, $1\frac{1}{2}$ miles above mouth and 5 miles southeast of Longmont.

Drainage Area—512 square miles.

Records Available—March 16, 1927, to September 30, 1938.

Maximum discharge observed during period 1927-38; 4,410 second feet, September 3, 1938. Gage height 6.94 feet.

Maximum Discharge—Year 1937; 680 second feet, June 26, 1937. Gage height 3.97 feet.

Maximum Discharge—Year 1938; 4,410 second feet, September 3, 1938. Gage height 6.94 feet.

Accuracy—Records considered good except those for periods of ice effect December 31, 1936, to March 4, 1937, and December 11-15, December 24, 1937, to February 7, 1938, each computed on basis of 2 and 3 discharge measurements and weather records, and are fair.

Diversions for storage and irrigation above station.

NORTH ST. VRAIN CREEK AT LONGMONT DAM, NEAR LYONS, COLORADO

Location—Water stage recorder in Sec. 16, T. 3 N., R. 71 W., $\frac{3}{4}$ of a mile above Longmont Dam, and 4 miles west of Lyons. City of Longmont pipe line diverts water below station. Datum lowered 1 foot October 8, 1936.

Drainage Area—109 square miles. Altitude, 6,080 feet above mean sea level.

Records Available—1913 to 1917 (partial records); June 1, 1926, to September 30, 1938.

Maximum discharge observed during period 1926-38; 972 second feet, September 2, 1938. Gage height 4.34 feet.

Maximum Discharge—Year 1937; 713 second feet, June 26, 1937. Gage height 3.86 feet.

Maximum Discharge—Year 1938; 972 second feet, September 2, 1938. Gage height 4.34 feet.

Accuracy—Records considered good in 1937 and excellent in 1938, except for discharges estimated November 17, 18, 1937, which are fair.

Diversions for storage above station.

ST. VRAIN CREEK AT LYONS, COLORADO

Location—Water stage recorder in Sec. 17, T. 3 N., R. 70 W., 300 feet below junction of North and South St. Vrain Creeks, and $\frac{3}{4}$ mile east of Lyons.

Drainage Area—226 square miles. Altitude, 5,349 feet above mean sea level.

Records Available—August 1, 1887, to October 31, 1890; June 13, 1895, to October 31, 1903; July 1, 1904, to September 30, 1938.

Maximum discharge observed during period 1887-90, 1895-1903, 1904-38; 2,340 second feet, May 27, 1935. Gage height 5.50 feet.

Maximum Discharge—Year 1937; 1,230 second feet, June 26, 1937. Gage height 4.37 feet.

Maximum Discharge—Year 1938; 1,650 second feet, September 3, 1938. Gage height 4.74 feet.

Accuracy—Records considered excellent.

Diversions for storage and irrigation above station. Several reservoirs partly regulate flow.

ST. VRAIN CREEK AT MOUTH NEAR PLATTEVILLE, COLORADO

Location—Water stage recorder in Sec. 3, T. 3 N., R. 67 W., at highway bridge 1 mile above mouth and 4 miles northwest of Platteville.

Drainage Area—1,000 square miles.

Records Available—April to December 31, 1915; February 24, 1927, to September 30, 1938.

Maximum discharge observed during period 1915, 1927-38; 8,360 second feet September 3, 1938. Gage height 8.93 feet.

Maximum Discharge—Year 1937; 1,990 second feet, June 27, 1937. Gage height 5.20 feet.

Maximum Discharge—Year 1938; 8,360 second feet, September 3, 1938. Gage height 8.93 feet.

Accuracy—Records considered good except those for period of missing gage heights, November 28 to December 4, 1936; June 26, 1937 (estimated), and those for periods of ice effect, December 28, 1936, to March 8, 1937, and from December 9, 1937, to January 16, 1938, January 25 to February 5, February 16-21, which were computed on basis of discharge measurements and weather records, and which are fair.

Diversions for irrigation above station.

LEFTHAND CREEK AT MOUTH AT LONGMONT, COLORADO

Location—Water stage recorder in Sec. 10, T. 2 N., R. 69 W., $\frac{3}{4}$ mile above mouth and 1 mile south of Longmont. Datum lowered 1.0 foot, July 6, 1937.

Drainage Area—74 square miles. Altitude, 4,990 feet above mean sea level.

Records Available—March 1, 1927, to September 30, 1938.

Maximum discharge observed during period 1927-38; 812 second feet, September 2, 1938. Gage height 6.10 feet.

Maximum Discharge—Year 1937; 192 second feet, June 3, 1937. Gage height 3.58 feet.

Maximum Discharge—Year 1938; 812 second feet, September 2, 1938. Gage height 6.10 feet.

Accuracy—Records considered fair. Discharge for periods of ice effect December 26, 1936, to March 11, 1937, and December 8 to February 7, 1938, February 9-10, 16-19, were computed on basis of 2 discharge measurements, respectively, and weather records; those for August 13-16, 1937, June 5-9, 17-19, 1938, were estimated.

Diversions for irrigation above station.

BIG THOMPSON RIVER NEAR ESTES PARK, COLORADO

Location—Water stage recorder in Sec. 29, T. 5 N., R. 72 W., $1\frac{1}{2}$ miles east of Estes Park.

Drainage Area—158 square miles. Altitude, 7,424 feet above mean sea level.

Records Available—June, 1930, to September 30, 1938. (Prior to February, 1934, station was maintained $1\frac{1}{2}$ miles downstream. Records comparable.)

Maximum discharge observed during period 1930-38; 1,590 second feet, June 16, 1935. Gage height 5.54 feet.

Maximum Discharge—Year 1937; 1,370 second feet, June 26, 1937. Gage height 5.05 feet.

Maximum Discharge—Year 1938; 1,310 second feet, June 22, 1938. Gage height 5.03 feet.

Accuracy—Records considered good except for periods of ice effect November 24, 1936, to April 19, 1937, and November 18 to April 6, 1938, computed on basis of 5 discharge measurements each period and weather records, and those for November 3-5, 1936, April 25, 26, 1937 (estimated), which are fair.

Diversions for irrigation above station.

BIG THOMPSON RIVER BELOW POWER HOUSE NEAR DRAKE, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 7, T. 5 N., R. 70 W., $\frac{1}{4}$ mile below city of Loveland Hydroelectric Plant, and $4\frac{1}{2}$ miles east of Drake. Cedar Creek enters $\frac{1}{8}$ mile downstream.

Drainage Area—277 square miles.

Records Available—October 1, 1928, to September 30, 1938. Records comparable at site 3 miles upstream, from September, 1917, to December, 1926.

Maximum discharge observed during period 1929-38; 1,950 second feet, June 14, 1935. Gage height 5.00 feet. Maximum known discharge, estimated, 8,000 second feet July 31, 1919.

Maximum Discharge—Year 1937; 1,460 second feet, June 26, 1937. Gage height 4.20 feet.

Maximum Discharge—Year 1938; 1,670 second feet, September 3, 1938. Gage height 4.50 feet.

Accuracy—Records considered good except those for period of ice effect, January 4-28, 1937 (computed on basis of one discharge measurement), and those for March 24-27, 1937 (estimated) and for January 25-26, 1938, April 19 and August 18-19, September 12, which were estimated, and are fair.

Diversions for irrigation above station. City of Loveland furnishes gage height record. Small storage reservoir above power plant (capacity about 30 acre-feet).

BIG THOMPSON RIVER AT MOUTH OF CANYON, NEAR DRAKE, COLORADO.

Location—Water stage recorder in Sec. 10, T. 5 N., R. 70 W., at mouth of canyon 800 feet above Handy Dam, 6½ miles below Drake. From 1917-1933 station was maintained ½ mile upstream; records are equivalent.

Records Available—1917-1933; April 19 to September 30, 1938.

Maximum discharge observed year 1938; 5,600 second feet, September 1, 1938. Gage height 6.60 feet.

Accuracy—Records considered excellent except for those estimated from April 19-20, which are good.

Diversions for irrigation above station.

BIG THOMPSON RIVER AT MOUTH NEAR LA SALLE, COLORADO

Location—Water stage recorder in SW¼ Sec. 34, T. 5 N., R. 66 W., at first bridge across Big Thompson River, 1 mile above mouth and 4 miles west of La Salle.

Drainage Area—818 square miles.

Records Available—April 1 to November 30, 1914; March 1, 1927, to September 30, 1938.

Maximum discharge observed during period 1914, 1927-38; 3,000 second feet, September 3, 1938. Gage height 7.31 feet.

Maximum Discharge—Year 1937; 935 second feet, September 4, 1937. Gage height 4.38 feet.

Maximum Discharge—Year 1938; 3,000 second feet, September 3, 1938. Gage height 7.31 feet.

Accuracy—Records considered fair. Those for period of ice effect December 28, 1936, to February 14, 1937, computed on basis of 2 discharge measurements and weather records; those for November 3-6, 24-27, December 5-11, 13-16, 1936, September 5-10, 1937, and for July 12-16, 1938, were estimated.

Diversions for irrigation above station.

CACHE LA POUDRE RIVER AT MOUTH OF CANYON NEAR FORT COLLINS, COLORADO

Location—Water stage recorder in Sec. 15, T. 8 N., R. 70 W., 3 miles below intake of Ft. Collins Water Works, and 11 miles west of Fort Collins.

Drainage Area—1,048 square miles. Altitude, 5,070 feet above mean sea level.

Records Available—May 15, 1884, to September 30, 1938.

Maximum discharge observed during period 1884-38; 8,550 second feet, June 15, 1923. Gage height 7.40 feet.

Greatest maximum discharge known occurred May 20, 1904; discharge not determined.

Maximum Discharge—Year 1937; 2,020 second feet, June 2, 1937. Gage height 3.89 feet.

Maximum Discharge—Year 1938; 6,180 second feet, June 22, 1938. Gage height 6.36 feet.

Accuracy—Records considered excellent except those for October 11-16, 1936 (estimated), those for period ice effect December 5, 1936, to March 11, 1937 (computed on basis of 3 discharge measurements and weather records) and those for September 1-30, October 18-20, 1937, and for ice effect period December 6, 1937, to March 5, 1938, and for missing gage heights August 15-20, which were computed on above basis, and are fair.

Diversions for storage and irrigation above station; trans-mountain inflow from the Colorado, Michigan and Laramie Rivers above station.

CACHE LA POUDRE RIVER NEAR MOUTH NEAR GREELEY, COLORADO

Location—Water stage recorder in Sec. 2, T. 5 N., R. 65 W., 2 miles east of Greeley and 2½ miles above mouth at highway bridge.

Drainage Area—1,840 square miles.

Records Available—March 24, 1903, to November 30, 1904; February 1, 1914, to December 17, 1919; and May 27, 1924, to September 30, 1938.

Maximum discharge observed during period 1903-04, 1914-19, 1924-38; 4,240 second feet, June 24, 26, 1917. Gage height 7.30 feet (former site and datum).

Maximum Discharge—Year 1937; 109 second feet, November 10, 1937. Gage height 3.03 feet.

Maximum Discharge—Year 1938; 1,100 second feet, September 4, 1938. Gage height 6.00 feet.

Accuracy—Records considered good except those for ice effect January 11, 12, and January 22 to February 6, 1937 (com-

puted on basis of weather records) and those estimated April 5-10, 1938, which are fair.

Diversions for irrigation above station.

NORTH FORK REPUBLICAN RIVER NEAR WRAY, COLORADO

Location—Staff gage in SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 9, T. 1 N., R. 44 W., 2 miles above mouth of Chief Creek and 3.3 miles west of Wray.

Records Available—March 23, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-1938; 270 second feet, July 13, 1938. Gage height 9.82 feet.

Maximum Discharge—Year 1937; 124 second feet, July 24, 1937. Gage height 7.10 feet.

Maximum Discharge—Year 1938; 270 second feet, July 13, 1938. Gage height 9.82 feet.

Accuracy—Records considered good except for estimated period from March 1 to 31, 1938, which are fair and all records are based on one daily staff gage reading.

Small diversions for irrigation above station.

NORTH FORK OF REPUBLICAN RIVER AT COLORADO- NEBRASKA STATE LINE, COLORADO

Location—Water stage recorder in Sec. 10, T. 1 N., R. 42 W., 100 feet east of Colorado-Nebraska state line.

Zero of gage is 3,336.09 feet above mean sea level.

Records Available—March, 1931, to September 30, 1938.

Maximum discharge observed during period 1931-38; 628 second feet, May 30, 1938. Gage height 4.54 feet.

Maximum Discharge—Year 1937; 139 second feet, July 24, 1937. Gage height 2.66 feet.

Maximum Discharge—Year 1938; 628 second feet, May 30, 1938. Gage height 4.54 feet.

Accuracy—Records considered good for 1937 and fair for 1938, except those for period of ice effect, January 1 to March 1, 1937 (computed on basis of 2 discharge measurements and weather records) and those for periods of missing gage heights, July 28 to August 4, and August 13, 22-24, 1937 (computed on basis of precipitation records) which are fair. Discharge estimated for ice effect period December 9-11, 1937, January 23, 1938, February 1-3, 5-11 and for periods February 13-21, 23-24, 26-28, March 1-2, 9-12, 27-28, April 7-8, June 16-17, July 3-14, 15, 30-31, August 1-2 and September 26-28, which are fair.

Diversions for irrigation above station.

GRIZZLY CREEK NEAR WALDEN, COLORADO

Location—Water stage recorder in Sec. 29, T. 8 N., R. 80 W., 10 miles south of Walden, and $\frac{1}{2}$ mile above junction with Little Grizzly Creek.

Drainage Area—229 square miles.

Records Available—May, 1904, to October, 1905; May to September, 1923; October, 1926, to September 30, 1938.

Maximum discharge observed during period 1904-05, 1923, 1926-38; 1,340 second feet, June 10, 1923. Gage height 4.8 feet.

Maximum Discharge—Year 1937; 320 second feet, May 8, 1937. Gage height 3.07 feet.

Maximum Discharge—Year 1938; 755 second feet, April 19, 1938. Gage height 4.79 feet.

Accuracy—Records considered fair in 1937 and good for 1938, except for period of ice effect November 19-30, 1937, and April 12-13, 1938, which were computed on basis of 2 discharge measurements and weather records, and are fair. Discharge for October 26, 27, November 3-30, 1936, April 1-28, June 16-21, 25-28, 30, July 1, 3-5, 1937, computed on basis of 3 discharge measurements and records for North Platte River near Walden. No record December 1, 1936, to March 31, 1937, and from December 1, 1937, to April 11, 1938.

Diversions for irrigation above station.

LITTLE GRIZZLY CREEK AT MOUTH NEAR HEBRON,
COLORADO

Location—Water stage recorder in Sec. 32, T. 8 N., R. 80 W., 1 mile above junction with Grizzly Creek and 3 miles north of Hebron. Prior to May 22, 1937, staff gage at same site and datum.

Drainage Area—96 square miles.

Records Available—June, 1904, to October, 1905; June, 1931, to September 30, 1938.

Maximum discharge observed during period 1904-05, 1931-38; 592 second feet, June 11, 1905.

Maximum Discharge—Year 1937; 442 second feet, May 30, 1937. Gage height 4.45 feet.

Maximum Discharge—Year 1938; 454 second feet, June 8, 1938. Gage height 4.46 feet.

Accuracy—Records considered good in 1937 and excellent in 1938 except those for periods of ice effect November 17-30, 1936, April 1-21, 1937, and November 9-30, 1937, April 16-19, 1938, computed on basis of 1 discharge measurement and weather records, and are fair. During period of missing gage heights, May 16-21 and June 5-7, 1937, computed on same basis.

Diversions for irrigation above station.

ROARING FORK NEAR WALDEN, COLORADO

Location—Water stage recorder in Sec. 11, T. 8 N., R. 81 W., at highway bridge 10 miles southwest of Walden.

Drainage Area—84 square miles. Zero of gage is 8,037.44 feet above mean sea level.

Records Available—May, 1904, to October, 1905; October, 1923, to September 30, 1938.

Maximum Discharge observed during period 1904-05, 1923-38; 790 second feet, June 15, 1924. Gage height 3.73 feet.

Maximum Discharge—Year 1937; 443 second feet, June 4, 1937. Gage height 2.71 feet.

Maximum Discharge—Year 1938; 603 second feet, April 18, 1938. Gage height 3.63 feet.

Accuracy—Records considered excellent, except those for periods of ice effect November 4, 8-11, 23-29, 1936, April 1-25, 1937, and November 18-22, 24-30, 1937, computed on basis of one discharge measurement, weather records and comparison with flow on nearby streams and which are fair. No record December 1, 1936, to March 31, 1937, and from December 1, 1937, to April 13, 1938.

Diversions for irrigation above station.

NORTH PLATTE RIVER NEAR WALDEN, COLORADO

Location—Water stage recorder in Sec. 6, T. 8 N., R. 80 W., at highway bridge 8 miles southwest of Walden. Roaring Fork enters above station.

Drainage Area—446 square miles.

Records Available—May 13, 1904, to October 31, 1905; October 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1904-05, 1923-38; 1,940 second feet, April 19, 1938. Gage height 5.74 feet.

Maximum Discharge—Year 1937; 1,260 second feet, June 5, 1937. Gage height 4.33 feet.

Maximum Discharge—Year 1938; 1,940 second feet, April 19, 1938. Gage height 5.74 feet.

Accuracy—Records considered excellent except those for periods of ice effect November 4-6, 9-14, 21-29, 1936, April 1-29, 1937 (computed on basis of 2 discharge measurements and records for station at Northgate), and for July 30 to August 2 (estimated) and those for ice period November 18-22, 24-30, 1937, and April 13-15, 1938, which are fair.

Diversions for irrigation above station.

NORTH PLATTE RIVER NEAR NORTHGATE, COLORADO

Location—Water stage recorder in Sec. 11, T. 11 N., R. 80 W., at highway bridge 6 miles south of Colorado-Wyoming state line, and 6 miles northwest of Northgate.

Drainage Area—1,440 square miles. Zero of gage is 7,806.98 feet above mean sea level.

Records Available—May to November, 1904; May, 1915, to September 30, 1938.

Maximum discharge observed during period 1904, 1915-38; 6,720 second feet, June 11, 1923. Gage height 6.24 feet.

Maximum Discharge—Year 1937; 2,410 second feet, June 5, 1937. Gage height 5.76 feet.

Maximum Discharge—Year 1938; 4,790 second feet, April 19, 1938. Gage height 5.08 feet.

Accuracy—Records considered excellent except those for periods of ice effect, November 3-7, November 24, 1936, to April 25, 1937, and November 7, 1937, to April 16, 1938, which were computed on basis of 2 discharge measurements for each period, and records for station at Saratoga, Wyoming, and are fair.

Diversions for irrigation above station.

NORTH FORK OF NORTH PLATTE RIVER NEAR WALDEN,
COLORADO

Location—Water stage recorder in Sec. 29, T. 9 N., R. 80 W., at Erickson ranch, $\frac{1}{4}$ mile above mouth and $\frac{7}{8}$ miles west of Walden.

Drainage Area—168 square miles.

Records Available—October, 1923, to September, 1928; May, 1937, to September 30, 1938.

Maximum discharge observed during period 1923-28, 1937-38; 694 second feet, April 19, 1926. Gage height 2.63 feet, former datum.

Maximum Discharge—Year 1937; 403 second feet, June 5, 1937. Gage height 2.85 feet.

Maximum Discharge—Year 1938; discharge undetermined.

Accuracy—Records considered excellent except those for period of ice effect from November 17-30, 1937; April 13-22, 1938, computed on basis of 2 discharge measurements, and records for North Platte River near Northgate. Those for May 7-9, 1938, computed on same basis, all of which are fair.

Diversions for irrigation above station.

WILLOW CREEK NEAR RAND, COLORADO

Location—Water stage recorder in Sec. 23, T. 6 N., R. 79 W., 2.6 miles northwest of Rand, and $2\frac{1}{2}$ miles above mouth.

Drainage Area—62 square miles.

Records Available—July 10, 1931, to September 30, 1938.

Maximum daily discharge observed during period 1931-38: 268 second feet, May 23, 1932.

Maximum Discharge—Year 1937; 121 second feet, June 4, 1937. Gage height 2.90 feet.

Maximum Discharge—Year 1938; 166 second feet, June 8, 1938. Gage height 3.75 feet.

Accuracy—Records considered excellent except those for period of ice effect November 9-30, 1937, computed on basis of one discharge measurement and weather records. May 19-24, 1938, computed on basis of records for station on Illinois near Rand.

Diversion for irrigation above station.

ILLINOIS CREEK NEAR RAND, COLORADO

Location—Water stage recorder in Sec. 30, T. 6 N., R. 78 W., 1 mile north of Rand and $2\frac{1}{2}$ miles above mouth of Willow Creek.

Drainage Area—77 square miles. Zero of gage is 8,550.93 feet above mean sea level.

Records Available—July 11, 1931, to September 30, 1938.

Maximum daily discharge observed during period 1931-38; 665 second feet, May 23, 1931.

Maximum Discharge—Year 1937; 230 second feet, June 3, 1937. Gage height 1.40 feet.

Maximum Discharge—Year 1938; 447 second feet, May 30, 1938. Gage height 2.42 feet.

Accuracy—Records considered good in 1937 and excellent in 1938, except those for estimated periods October 29-31, 1936, April 22, 1937, May 19-24, 1938, and August 20-22, 1938, which are fair. No records November to April of each year.

Diversions for irrigation above station.

ILLINOIS CREEK AT WALDEN, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 29, T. 9 N., R. 79 W., $\frac{1}{2}$ mile southwest of Walden. Prior to July 1, 1937, station located 350 feet upstream at different datum.

Drainage Area—254 square miles. Zero of gage is 8,038.80 feet above mean sea level.

Records Available—May 1, 1917, to August 31, 1918, and May 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1917-18, 1923-38; 2,520 second feet, May 28, 1926. Gage height 6.40 feet; former site and datum.

Maximum Discharge—Year 1937; 396 second feet, June 4, 1937. Gage height 2.23 feet; former site and datum.

Maximum Discharge—Year 1938; 614 second feet, April 18, 1938. Gage height 4.35 feet.

Accuracy—Records considered good except those for October 28 to November 3, 1936, June 23-30, 1937, October 6-10, 12-17, 1937, which were computed on basis of records for Michigan River near Cowdrey and at Walden, and are fair. No records December 2, 1936, to April 22, 1937, and December 1, 1937, to April 15, 1938.

Diversions for irrigation above station.

MICHIGAN RIVER NEAR LINDLAND, COLORADO

Location—Water stage recorder in Sec. 21, T. 7 N., R. 77 W., at Cameron Pass highway bridge 3 miles southeast of Lindland, and 1 mile above mouth of North Fork of Michigan River.

Drainage Area—62 square miles. Zero of gage is 8,734.28 feet above mean sea level.

Records Available—July 12, 1931, to September 30, 1938.

Maximum discharge observed during period 1931-38; 663 second feet, June 11, 1933. Gage height 3.08 feet.

Maximum Discharge—Year 1937; 292 second feet, July 13, 1937. Gage height 1.88 feet.

Maximum Discharge—Year 1938; 597 second feet, June 6, 1938. Gage height 2.99 feet.

Accuracy—Records considered good except those for October 12 to November 30, 1936, which were computed on basis of one discharge measurement, weather records, and those for period of missing gage heights July 20-25, August 1-5, 1938, computed on basis of Illinois at Rand, and which are fair. No records from December to April.

Diversions for irrigation above station.

MICHIGAN RIVER AT HAWORTH SCHOOL, NEAR LINDLAND, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 36, T. 8 N., R. 78 W., $\frac{1}{4}$ mile east of Haworth School, and $2\frac{1}{2}$ miles northwest of Lindland.

Records Available—May, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 580 second feet, June 6, 1938. Gage height 3.50 feet.

Maximum Discharge—Year 1937; 524 second feet, July 13, 1937. Gage height 2.96 feet.

Maximum Discharge—Year 1938; 580 second feet, June 6, 1938. Gage height 3.50 feet.

Accuracy—Records considered excellent except for period of missing gage heights May 1-21, 1937, which were computed on basis of records for station near Lindland, and which are good.

Diversions for irrigation above station.

MICHIGAN RIVER AT WALDEN, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 21, T. 9 N., R. 79 W., $\frac{1}{2}$ mile north of Walden.

Drainage Area—185 square miles. Zero of gage is 8,044.87 feet above mean sea level.

Records Available—May 8, 1904, to October 31, 1905; June 1, 1908, to July 26, 1918; May 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1904-05, 1923-38; 1,070 second feet, June 10, 1923. Gage height 3.3 feet.

Maximum Discharge—Year 1937; 430 second feet, July 15, 1937. Gage height 2.6 feet.

Maximum Discharge—Year 1938; 615 second feet, June 8, 1938. Gage height 3.05 feet.

Accuracy—Records considered good except those for October 12 to November 30, 1936, and for November 18-30, 1937, which were computed on basis of one discharge measurement, weather records and records for Roaring Fork at Walden, and are fair. No records December to April, 1937 and 1938.

Diversion for irrigation above station.

MICHIGAN RIVER NEAR COWDREY, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 11, T. 10 N., R. 80 W., 1 mile above mouth and $1\frac{1}{2}$ miles west of Cowdrey.

Zero of gage is 7,878.28 feet above mean sea level.

Records Available—May, 1904, to October, 1905; May, 1937, to September 30, 1938.

Maximum discharge observed during period 1904-05, 1937-38; 925 second feet, April 19, 1938. Gage height 3.40 feet.

Maximum Discharge—Year 1937; 535 second feet, July 15, 1937. Gage height 2.66 feet.

Maximum Discharge—Year 1938; 925 second feet, April 19, 1938. Gage height 3.40 feet.

Accuracy—Records considered good. Those for May 19-21, 1937, estimated on basis of one discharge measurement and for November 18-30, 1937, computed on same basis.

Diversions for irrigation above station.

OWL CREEK NEAR LINDLAND, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 15, T. 7 N., R. 78 W., at site of former postoffice of Owl and 3 miles west of Lindland.

Records Available—June to September 30, 1938. (Discontinued.)

Maximum discharge observed during period, 12 second feet, June 16, 1938. Gage height 1.59 feet.

Accuracy—Records considered good. Treasure Ditch diverts water from Michigan River into Owl Creek half mile above station.

Diversions for irrigation above station.

CANADIAN RIVER AT COWDREY, COLORADO

Location—Water stage recorder in Sec. 6, T. 10 N., R. 79 W., 1,000 feet above mouth of Government Creek, and $\frac{1}{2}$ mile north of Cowdrey. Prior to November 15, 1931, recorder 600 feet upstream at different datum. One small diversion between the two sites.

Drainage Area—201 square miles.

Records Available—May, 1904, to October, 1905; May, 1929, to September, 1931; and May, 1937, to September 30, 1938.

Maximum daily discharge observed during period 1904-5, 1929-31, 1937-38; 600 second feet, June 10, 1905.

Maximum Discharge—Year 1937; 181 second feet (estimated) June 5, 1937.

Maximum Discharge—Year 1938; 445 second feet, April 19, 1938. Gage height 4.51 feet.

Accuracy—Records considered good except for records May 1 to June 23, 1937, and November 7 to 30, 1937, April 11-16, 1938, which were computed on basis of 2 discharge measurements and records for Michigan River near Walden.

Diversions for irrigation above station.

LARAMIE RIVER NEAR GLENDEVEY, COLORADO

Location—Water stage recorder in Sec. 25, T. 10 N., R. 76 W., just below mouth of Nunn Creek, and above Stub Creek at Sholines Ranch, and $1\frac{1}{2}$ miles north of present location of Glendevy Post Office.

Drainage Area—101 square miles.

Records Available—June 24, 1904, to October 31, 1905; August 18, 1910 to September 30, 1938.

Maximum discharge observed during period 1904-05, 1910-38; 2,240 second feet, June 9, 1923.

Maximum Discharge—Year 1937; 289 second feet, May 15, 1937. Gage height 2.64 feet.

Maximum Discharge—Year 1938; 690 second feet, June 23, 1938. Gage height 3.69 feet.

Accuracy—Records considered excellent except those for period of ice effect November 18-30, 1937, computed on basis of weather records, and are fair. No records December 1, 1936, to March 31, 1937, and from December 1, 1937, to April 11, 1938.

Diversions for irrigation above station, and two trans-mountain diversions into Cache la Poudre River above station.

LARAMIE RIVER NEAR JELM, WYOMING

Location—Water stage recorder in Sec. 15, T. 12 N., R. 77 W., $\frac{1}{4}$ mile north of Colorado-Wyoming State Line and 4 miles south of Old Jelm. Johnson Creek enters $\frac{1}{2}$ mile below station.

Drainage Area—297 square miles. Zero of gage is 7,685.32 feet above mean sea level.

Records Available—June, 1904, to October, 1905; May 7, 1911, to September 30, 1938.

Maximum discharge observed during period 1904-05, 1911-38; 4,200 second feet, June 9, 1923. Gage height 4.15 feet.

Maximum Discharge—Year 1937; 1,470 second feet, July 11, 1937. Gage height 3.53 feet.

Maximum Discharge—Year 1938; 1,590 second feet, May 30, 1938. Gage height 3.75 feet.

Accuracy—Records considered good. Discharge for periods of ice effect November 9-11, 20-23, November 29, 1936, to March 31, 1937, computed on basis of two discharge measurements, gage heights and weather records, and those for April 1-21, 23-25, 1937, on basis one discharge measurement. During ice period effect November 13, 1937, to April 3, April 5, 1938, discharge computed on basis of 2 measurements and weather records.

Diversions for irrigation above station.

Discharge of South Platte River at Eleven Mile Canon Near Lake George, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	198	79	22	9	9	8.5	8	22	73	27	137	73
2....	196	79	22	9	9	8.5	26	23	100	27	91	53
3....	156	55	13	9	9	8.5	8	23	56	26	66	53
4....	82	40	13	9	9	8.5	8	24	28	25	66	69
5....	101	36	9	9	9	8.5	8	25	28	25	65	79
6....	114	36	9	9	9	8.5	8	25	28	25	65	79
7....	112	36	9	9	9	8	8	25	23	25	63	45
8....	114	35	9	9	9	8	8	25	17	25	63	42
9....	98	39	9	9	9	8	8	25	17	25	47	47
10....	90	49	9	9	9	8	8	40	14	25	20	44
11....	80	48	9	9	9	8	8	66	12	25	9.0	34
12....	73	48	9	9	9	8	8	127	37	25	9.5	30
13....	73	50	9	9	9	8	8	144	34	25	17	26
14....	73	50	9	9	9	8	8	144	9.0	25	32	28
15....	73	50	9	9	9	8	8	148	8.5	25	52	28
16....	73	46	9	9	9	8	8	193	7.6	25	36	25
17....	74	33	9	9	9	8	12	167	7.6	25	31	23
18....	74	33	9	9	9	8	114	148	7.2	25	96	15
19....	55	34	9	9	9	8	114	156	8.0	19	124	13
20....	46	35	9	9	9	8	114	175	8.0	14	42	12
21....	56	36	9	9	8.5	8	112	180	12	14	28	12
22....	72	36	9	9	8.5	8	120	70	17	14	30	12
23....	74	42	9	9	8.5	8	127	44	17	14	30	12
24....	88	47	9	9	8.5	8	127	58	17	14	34	12
25....	73	45	9	9	8.5	8	116	88	17	15	38	9.0
26....	70	45	9	9	8.5	8	69	193	17	22	38	5.2
27....	65	38	9	9	8.5	8	69	109	17	35	37	5.2
28....	69	35	9	9	8.5	8	58	38	21	44	62	4.8
29....	80	35	9	9	....	8	36	46	27	65	70	4.4
30....	72	35	9	9	....	8	23	65	27	127	52	4.4
31....	72	....	9	9	....	8	....	47	....	177	94	....
Total	2746	1305	313	279	248.0	251.0	1357	2663	711.9	1029	1644.5	899.0
Mean.	88.6	43.5	10.1	9	8.86	8.10	45.2	85.9	23.7	33.2	53.0	30.0
Max..	198	79	22	9	9	8.5	127	193	100	177	137	79
Min..	46	33	9	9	8.5	8.0	8	22	7.2	14	9.0	4.4
Acres-ft.	5450	2590	621	553	492	498	2690	5280	1410	2040	3260	1780

Total run-off for water year 1936-37=26,660 acre-feet.

Discharge of South Platte River at Eleven Mile Canon Near Lake George, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	11	26	14	19	18	10	65	26	18	26	27	217
2....	10	25	14	19	18	10	112	24	18	26	27	262
3....	18	22	14	19	18	10	114	22	17	27	27	124
4....	32	21	14	19	18	51	56	22	18	27	27	26
5....	32	18	15	19	18	86	88	22	18	27	27	26
6....	32	17	15	19	18	32	24	22	18	27	26	25
7....	32	17	15	19	18	32	56	22	18	27	26	25
8....	32	17	15	19	18	23	83	22	18	27	25	25
9....	32	17	15	12	18	23	83	33	18	27	25	25
10....	29	17	15	12	18	23	83	47	18	28	26	26
11....	28	17	15	12	18	23	83	37	17	28	26	26
12....	34	17	19	12	18	32	83	30	17	28	109	26
13....	34	17	19	12	18	32	52	30	17	28	25	26
14....	34	17	19	12	18	32	52	28	17	29	26	27
15....	29	17	19	12	18	32	52	15	19	29	26	27
16....	33	14	19	12	18	32	116	15	22	28	26	27
17....	32	10	19	12	18	32	120	15	25	27	26	26
18....	35	10	19	12	18	45	146	10	25	27	26	26
19....	44	10	19	12	18	45	110	3.4	25	27	26	25
20....	36	10	19	12	18	47	96	3.7	25	27	26	25
21....	26	11	19	12	18	47	110	6.0	25	27	26	25
22....	26	11	19	12	18	47	90	6.8	26	27	26	25
23....	30	11	19	12	10	47	72	6.8	26	26	26	25
24....	37	11	19	12	10	47	45	7.2	26	26	26	26
25....	38	11	19	12	10	36	45	10	26	26	26	25
26....	36	11	19	12	10	36	40	14	27	27	26	25
27....	36	10	19	12	18	35	37	12	26	27	26	50
28....	40	10	19	12	18	35	37	15	26	27	26	91
29....	44	10	19	12	....	35	32	18	26	27	114	91
30....	44	10	19	18	....	35	26	18	26	27	222	91
31....	35	....	19	18	....	35	....	18	....	28	390	....
Total	991	442	541	440	472	1087	2208	580.9	648	842	1539	1515
Mean.	32.0	14.7	17.5	14.2	16.9	35.1	73.6	18.7	21.6	27.2	49.6	50.5
Max..	44	26	19	19	18	86	146	47	27	29	390	262
Min..	10	10	14	12	10	10	24	3.4	17	26	25	25
Acres-ft.	1970	877	1070	873	936	2160	4380	1150	1290	1670	3050	3000

Total run-off for water year 1937-38=22,430 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River Above Lake Cheesman, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	308	164	....	....	....	....	30	67	131	110	224	153
2....	308	166	....	....	....	....	48	60	140	115	168	94
3....	316	168	....	....	....	....	30	57	115	100	118	89
4....	181	166	....	....	....	....	30	53	90	85	100	96
5....	164	153	....	....	....	....	30	53	76	71	98	137
6....	195	133	....	....	....	....	36	57	67	65	100	153
7....	192	78	....	....	....	....	46	62	64	64	104	159
8....	186	85	....	....	....	....	50	60	69	58	98	120
9....	183	93	....	....	....	....	60	57	40	49	98	102
10....	164	120	....	....	....	....	65	58	35	53	67	87
11....	146	114	....	....	....	....	67	96	34	58	39	81
12....	124	116	....	....	....	....	78	144	28	91	26	67
13....	130	112	....	....	....	....	83	188	57	280	28	53
14....	130	110	....	....	....	....	110	195	43	159	32	44
15....	123	100	....	....	....	....	133	198	32	94	64	47
16....	132	100	....	....	....	....	139	324	24	76	85	43
17....	128	90	....	....	....	....	139	308	26	65	69	42
18....	122	80	....	....	....	....	148	260	25	57	100	36
19....	120	80	....	....	....	....	157	266	26	46	221	34
20....	108	85	....	....	....	....	166	243	24	43	133	26
21....	108	85	....	....	....	....	177	263	22	36	64	23
22....	133	80	....	....	....	....	177	221	26	30	52	23
23....	131	85	....	....	....	....	190	118	26	29	49	22
24....	139	95	....	....	....	....	212	120	25	26	49	26
25....	139	100	....	....	....	....	188	144	29	28	52	26
26....	133	100	....	....	....	....	139	192	170	28	89	24
27....	144	95	....	....	....	....	118	284	488	42	76	17
28....	124	95	....	....	....	....	122	133	370	71	67	12
29....	135	90	....	....	....	....	102	118	250	124	94	20
30....	139	80	....	....	....	....	76	159	110	273	100	20
31....	137	....	....	....	....	....	....	139	....	320	100	....
Total	4922	3218	....	....	....	....	3146	4697	2662	2746	2764	1876
Mean.	159	107	....	....	....	....	105	152	88.7	88.6	89.2	65.5
Max..	316	168	....	....	....	....	212	324	488	320	224	159
Min..	108	78	....	....	....	....	30	53	22	26	26	12
Acre-ft.	9760	6380	....	....	....	....	6240	9320	5280	5450	5480	3720

Total run-off for period=51,630 acre-feet.

Discharge of South Platte River Above Lake Cheesman, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	34	50	....	....	....	....	190	126	124	263	52	691
2....	25	43	....	....	....	....	177	106	133	155	46	300
3....	22	44	....	....	....	....	112	122	177	135	44	698
4....	26	40	....	....	....	....	83	131	186	100	76	375
5....	42	36	....	....	....	....	81	137	186	93	106	296
6....	42	32	....	....	....	....	65	139	188	87	80	253
7....	42	32	....	....	....	....	52	139	296	69	87	198
8....	39	31	....	....	....	....	72	135	300	46	64	221
9....	39	24	....	....	....	....	96	137	288	40	65	208
10....	39	24	....	....	....	....	100	159	256	62	76	190
11....	39	30	....	....	....	....	118	195	161	85	120	135
12....	35	25	....	....	....	....	146	181	212	71	284	263
13....	39	....	....	....	....	....	122	179	221	62	338	470
14....	37	....	....	....	....	....	195	168	221	180	210	395
15....	43	....	....	....	....	....	415	153	230	282	112	221
16....	40	....	....	....	....	....	249	153	186	160	106	221
17....	40	....	....	....	....	....	273	139	166	112	93	183
18....	46	....	....	....	....	....	370	131	179	168	85	175
19....	50	....	....	....	....	....	524	120	183	142	72	166
20....	52	....	....	....	....	....	320	110	170	124	61	150
21....	50	....	....	....	....	....	308	104	133	108	60	146
22....	43	Nov. 1	....	....	....	Mar. 24	224	108	157	91	58	139
23....	47	to 12	....	....	....	to 31	181	122	218	78	57	139
24....	47	....	....	....	....	....	85	161	172	316	71	58
25....	58	....	....	....	....	....	85	142	98	375	65	58
26....	67	....	....	....	....	....	71	133	96	218	76	142
27....	64	....	....	....	....	....	67	150	104	200	142	179
28....	58	....	....	....	....	....	71	150	106	186	137	194
29....	69	....	....	....	....	....	69	150	144	215	188	240
30....	71	....	....	....	....	....	62	137	126	370	100	464
31....	67	....	....	....	....	....	104	....	128	....	76	459
Total	1412	411	....	....	....	....	614	5496	4168	6451	3568	4149
Mean.	45.5	34.2	....	....	....	....	76.8	183	134	215	115	134
Max..	71	50	....	....	....	....	104	524	195	375	282	464
Min..	22	24	....	....	....	....	62	52	96	124	40	44
Acre-ft.	2800	815	....	....	....	....	1220	10900	8270	12800	7080	8230

Total run-off for period=66,615 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River Below Lake Cheesman, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	351	25	27	9.8	42	25	13	91	167	170	423	217
2....	348	25	29	9.8	39	18	14	66	76	128	374	217
3....	348	25	46	9.8	39	18	14	88	55	117	247	188
4....	314	25	47	9.8	39	18	14	80	37	97	162	177
5....	201	25	25	9.8	39	18	14	78	37	116	179	220
6....	206	36	25	9.8	39	18	14	97	37	141	240	220
7....	208	25	25	9.8	39	18	14	97	37	84	253	232
8....	208	25	25	9.8	39	16	14	116	37	84	250	264
9....	208	25	19	9.8	39	13	14	125	37	84	245	212
10....	208	25	16	9.8	39	13	14	74	37	175	237	154
11....	206	25	16	9.8	39	13	14	82	44	147	199	136
12....	150	25	16	9.8	39	13	14	147	49	167	177	136
13....	65	25	16	9.8	39	13	10	217	48	430	154	140
14....	26	25	14	9.8	39	13	9.8	234	32	591	160	165
15....	25	25	10	14	39	13	9.4	247	25	314	196	149
16....	25	25	10	30	39	13	49	266	25	106	507	117
17....	25	25	9.8	42	39	13	171	374	25	97	398	136
18....	25	25	9.8	42	39	13	201	320	25	112	351	149
19....	25	27	9.8	42	39	13	212	299	25	338	595	136
20....	25	28	9.8	42	39	13	305	381	25	261	591	128
21....	20	28	9.8	42	39	13	302	364	25	242	469	126
22....	18	28	9.8	42	39	13	234	360	25	272	141	117
23....	25	28	9.8	42	39	13	240	314	25	308	141	126
24....	25	28	9.8	42	39	13	305	203	25	134	217	138
25....	25	28	9.8	42	34	13	293	186	34	141	256	128
26....	25	28	9.8	42	32	13	224	215	44	199	299	128
27....	25	27	9.8	42	30	13	167	406	115	242	215	125
28....	25	27	9.8	42	27	13	188	341	700	344	203	104
29....	25	27	9.8	42	....	14	158	212	400	326	217	102
30....	25	27	9.8	42	....	14	104	192	250	194	234	110
31....	25	....	9.8	42	....	13	....	357	....	344	237	....
Total	3460	792	513.0	811.2	1062	450	3349.2	6629	2523	6505	8567	4697
Mean.	112	26.4	16.5	26.2	37.9	14.5	112	214	84.1	210	276	157
Max..	351	36	47	42	42	25	305	406	700	591	595	264
Min..	18	25	9.8	9.8	27	13	9.4	66	25	84	141	102
Acre-ft.	6860	1570	1020	1610	2110	893	6640	13150	5000	12900	16990	9320

Total run-off for water year 1936-37==78,060 acre-feet.

Discharge of South Platte River Below Lake Cheesman, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	133	73	32	29	22	16	11	9.8	8.8	55	234	680
2....	186	72	32	29	22	14	11	10	11	335	364	669
3....	201	53	32	29	22	12	11	10	18	348	287	101
4....	134	54	33	29	22	12	11	11	20	264	284	50
5....	134	47	33	29	22	12	20	11	14	167	395	52
6....	133	37	33	29	22	12	22	11	14	112	402	49
7....	131	34	33	29	22	14	11	11	42	88	237	47
8....	130	32	32	29	22	14	11	11	212	67	250	45
9....	118	32	25	29	22	17	11	11	444	58	167	42
10....	118	32	20	28	22	17	11	11	560	59	169	42
11....	118	32	22	28	22	17	11	11	188	58	256	43
12....	165	32	23	29	22	18	11	11	61	57	430	48
13....	194	32	23	30	22	12	82	11	49	57	571	51
14....	145	32	23	30	22	12	138	11	37	56	626	53
15....	123	32	23	29	22	12	314	11	37	100	420	55
16....	140	32	23	29	22	12	384	11	37	278	360	56
17....	147	31	24	29	22	12	378	9.4	37	329	199	57
18....	147	31	24	29	22	12	344	8.4	37	323	152	57
19....	145	31	24	29	22	12	556	8.8	37	332	145	42
20....	145	31	24	22	22	9.8	665	9.0	37	296	114	34
21....	181	31	24	22	22	9.4	299	9.0	38	111	110	35
22....	201	31	24	22	16	20	206	9.0	39	118	302	35
23....	171	31	24	22	16	62	141	9.0	40	90	296	35
24....	158	31	24	22	16	67	116	9.0	40	98	293	35
25....	140	31	24	22	16	68	111	9.0	40	126	287	35
26....	133	31	25	22	16	69	192	11	40	117	434	100
27....	86	31	26	22	16	69	125	14	39	154	458	206
28....	61	31	27	22	16	74	97	16	37	360	451	194
29....	60	31	29	22	....	85	96	18	27	398	704	215
30....	62	31	29	22	....	34	9.8	18	36	293	595	264
31....	64	....	29	22	....	11	....	11	....	192	526	....
Total	4204	1092	823	815	574	837.2	4405.8	341.4	2286.8	5496	10518	3427
Mean.	136	36.4	26.5	26.3	20.5	27.0	147	11.0	76.2	177	339	114
Max..	201	73	33	30	22	85	665	18	560	398	704	680
Min..	60	31	20	22	16	9.4	9.8	8.4	8.8	55	110	34
Acre-ft.	8340	2170	1630	1620	1140	1660	8740	677	4540	10900	20860	6800

Total run-off for water year 1937-38==69,080 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of North Fork of South Platte River at South Platte, Colo., for Year Ending
Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	169	102	67	37	20	29	42	102	291	410	149	84
2....	155	97	67	36	20	29	47	104	387	402	138	95
3....	151	62	64	32	20	29	47	108	437	297	134	112
4....	142	77	52	29	22	29	36	110	365	276	126	122
5....	140	114	45	30	26	30	35	140	365	279	116	114
6....	149	120	36	28	28	35	43	176	335	279	200	104
7....	132	106	36	30	28	40	42	183	314	255	220	102
8....	130	84	42	26	30	48	33	195	304	258	202	97
9....	126	92	*48	30	32	50	42	202	291	243	190	87
10....	130	92	52	26	34	54	59	252	264	237	186	78
11....	130	88	53	31	34	*57	62	232	246	234	132	77
12....	128	87	55	34	34	68	71	198	252	335	94	75
13....	110	87	56	34	35	84	82	218	249	273	94	71
14....	116	100	56	37	35	97	114	258	261	232	94	73
15....	122	95	57	37	35	90	136	285	297	210	88	69
16....	124	95	58	28	36	72	176	318	264	202	88	73
17....	122	92	58	28	36	64	169	294	252	258	124	84
18....	116	95	58	26	37	66	90	270	237	273	151	77
19....	112	78	56	*24	*37	59	110	258	220	255	136	60
20....	116	80	54	24	36	44	124	232	200	240	92	58
21....	118	78	50	22	35	52	108	212	205	234	81	59
22....	116	80	53	22	35	47	138	202	205	229	77	58
23....	112	81	54	21	35	51	155	212	195	178	77	58
24....	102	56	55	21	34	33	102	202	190	138	76	62
25....	110	63	52	21	32	37	99	220	202	138	81	62
26....	110	99	55	20	29	36	100	215	599	149	90	63
27....	104	88	50	20	29	35	142	193	580	176	87	62
28....	114	80	43	20	29	37	134	193	421	198	82	59
29....	120	75	47	20	....	39	110	212	354	243	80	60
30....	116	75	39	20	....	34	100	270	346	188	97	59
31....	110	....	33	20	....	37	....	279	....	162	94	....
Total	3852	2618	1601	834	873	1512	2739	6545	9128	7481	3676	2314
Mean.	124	87.3	51.6	26.9	31.2	48.8	91.3	211	304	241	119	77.1
Max.	169	120	67	37	37	97	176	318	599	410	220	122
Min.	102	56	33	20	20	29	33	102	190	138	76	58
Acre-ft.	7640	5190	3180	1650	1730	3000	5430	12980	18110	14840	7290	4590

Total run-off water year 1936-37=85,630 acre-feet.

*Discharge measurement.

**Discharge of North Fork of South Platte River at South Platte, Colo., for Year Ending
Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	100	62	40	35	25	45	46	530	900	535	270	321
2....	99	55	40	45	30	45	42	444	860	490	250	350
3....	85	58	40	45	30	40	44	425	830	433	246	671
4....	75	58	40	40	35	45	47	406	790	395	181	705
5....	69	56	40	35	35	45	58	395	750	365	157	652
6....	64	52	40	30	35	35	71	365	720	335	149	544
7....	62	55	45	30	35	20	56	361	680	304	151	490
8....	72	59	45	40	35	20	50	391	700	279	149	517
9....	69	52	45	40	40	30	54	402	720	264	138	452
10....	66	59	45	40	38	35	62	402	740	264	166	380
11....	63	58	45	40	45	40	58	425	696	264	243	444
12....	64	55	50	40	50	40	63	456	691	252	212	642
13....	67	43	60	39	45	45	68	490	715	229	188	686
14....	64	45	45	40	40	40	95	558	686	307	160	544
15....	62	54	45	45	35	30	130	580	642	429	169	486
16....	66	50	46	55	25	30	118	604	638	300	212	482
17....	68	44	40	60	20	40	155	623	623	340	218	469
18....	67	42	40	50	20	45	212	638	623	360	215	440
19....	68	35	35	45	20	45	273	599	571	350	190	414
20....	64	47	20	40	25	40	246	580	571	370	178	387
21....	63	55	25	35	45	35	264	620	623	340	155	383
22....	62	50	35	35	50	40	288	730	671	310	132	365
23....	59	45	40	35	50	50	291	660	725	280	116	361
24....	63	50	45	30	55	50	310	630	630	240	112	346
25....	64	40	40	25	30	49	335	630	580	250	118	335
26....	66	34	35	25	40	49	425	680	570	230	270	314
27....	62	35	35	25	40	42	494	730	580	220	202	294
28....	62	35	35	30	35	54	421	800	590	270	232	285
29....	66	30	45	30	....	50	440	870	620	320	215	270
30....	60	40	60	25	....	46	461	960	610	320	229	261
31....	56	....	40	25	....	37	....	900	....	300	273	....
Total	2097	1453	1281	1154	1068	1257	5677	17884	20345	9945	5896	13290
Mean.	67.6	48.4	41.3	37.2	36.0	40.5	189	577	678	321	190	443
Max.	100	62	60	60	55	54	494	960	900	535	273	705
Min.	56	30	20	25	20	20	42	361	570	220	112	261
Acre-ft.	4160	2880	2540	2290	2000	2490	11260	35470	40350	19730	11690	26360

Total run-off for water year 1937-38=161,200 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at South Platte, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	490	159	122	58	63	79	84	275	540	520	550	303
2....	577	152	126	50	65	73	89	247	530	480	505	313
3....	525	122	132	45	66	73	89	250	535	515	437	316
4....	525	140	124	44	72	72	82	269	460	402	284	297
5....	394	164	115	43	74	73	78	272	428	398	291	326
6....	402	183	100	42	78	80	84	323	398	470	406	313
7....	377	167	88	42	80	90	83	337	381	373	475	320
8....	358	146	81	42	83	102	78	347	373	369	442	333
9....	347	141	*78	42	86	114	90	373	377	362	424	320
10....	347	144	80	42	89	120	100	410	358	373	410	245
11....	347	143	81	43	90	*123	112	347	358	495	323	221
12....	310	141	83	45	90	125	136	365	358	500	269	217
13....	206	134	85	47	91	130	150	480	344	683	242	212
14....	166	143	80	50	93	130	196	525	337	796	240	221
15....	170	139	78	55	95	130	221	588	358	632	245	228
16....	174	139	77	58	95	125	275	604	316	347	424	198
17....	174	138	76	64	99	120	424	654	300	373	599	198
18....	168	139	75	63	100	115	300	654	291	402	485	221
19....	162	130	75	*58	*101	115	377	566	284	560	577	210
20....	164	126	72	60	104	98	414	643	266	555	707	189
21....	157	150	71	62	104	100	442	616	266	485	555	187
22....	153	134	70	62	104	94	505	604	272	475	323	184
23....	157	138	70	62	100	97	470	610	258	475	228	191
24....	153	118	70	62	99	83	470	485	256	333	261	210
25....	161	122	70	62	90	87	480	465	261	272	320	194
26....	163	148	74	62	87	78	455	470	626	307	385	196
27....	165	141	70	62	84	77	419	577	555	406	355	194
28....	178	133	68	62	81	78	406	616	856	475	278	178
29....	182	124	66	62	....	82	385	470	955	610	310	173
30....	178	124	60	62	....	76	291	520	822	410	337	178
31....	168	....	52	62	....	82	....	671	....	406	358	....
Total	8198	4222	2569	1675	2463	3021	7755	14633	12719	14249	12045	7089
Mean.	264	141	82.9	54.0	88.0	97.5	260	472	424	460	389	236
Max.	577	183	132	64	104	130	505	671	955	796	707	333
Min.	153	118	52	42	63	72	78	247	256	272	228	173
Acre-ft.	16260	8370	5100	3320	4890	5990	15440	29020	25230	28260	23890	14060

Total run-off for water year 1936-37=179,800 acre-feet.

*Discharge measurement.

Discharge of South Platte River at South Platte, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	240	150	55	75	60	85	130	797	1440	638	500	1040
2....	247	153	55	85	65	80	100	683	1430	818	660	1350
3....	278	143	65	80	70	80	100	695	1400	818	572	1130
4....	228	138	65	75	75	95	105	654	1340	770	510	1020
5....	208	134	65	70	75	90	110	665	1200	654	520	958
6....	203	122	70	65	70	65	130	643	1150	540	648	825
7....	201	120	55	60	65	65	120	632	1030	495	424	751
8....	212	119	50	65	70	60	100	648	1060	428	470	751
9....	196	114	50	70	70	75	99	665	1250	385	351	654
10....	191	116	55	80	*70	75	115	701	1390	377	406	604
11....	189	116	90	75	70	85	114	770	1240	362	550	648
12....	208	114	100	75	75	85	114	825	923	351	638	895
13....	258	107	95	*79	75	90	131	832	951	344	732	965
14....	242	104	75	80	70	85	313	902	839	398	902	784
15....	196	100	80	85	65	75	510	944	758	505	660	738
16....	208	95	*84	90	55	75	566	1010	758	550	701	725
17....	226	90	75	95	50	70	707	951	732	632	566	719
18....	226	85	60	90	50	80	744	909	719	689	465	665
19....	224	80	50	85	55	80	965	853	648	648	432	626
20....	219	90	40	80	70	75	1010	846	654	665	390	566
21....	228	95	40	75	75	85	825	895	707	446	347	545
22....	264	85	45	65	80	80	626	1010	719	442	485	525
23....	258	80	55	60	85	85	616	937	832	394	495	500
24....	235	90	80	60	100	120	577	902	707	358	450	485
25....	228	85	80	55	55	143	577	902	665	414	437	475
26....	214	*70	70	50	85	153	738	958	643	424	804	465
27....	198	65	70	55	80	150	860	1050	654	419	846	572
28....	155	55	75	60	75	159	555	1180	671	616	764	550
29....	157	50	90	60	....	169	626	1470	701	725	909	540
30....	150	50	110	60	....	171	665	1550	689	643	1080	555
31....	148	....	95	55	....	140	....	1430	....	520	909	....
Total	6635	3015	2144	2214	1960	3025	12948	27909	27900	16468	18623	21626
Mean.	214	100	69.2	71.4	70.0	97.6	432	900	930	531	601	721
Max.	278	153	110	95	100	171	1010	1550	1440	818	1080	1350
Min.	148	50	40	50	50	60	99	632	643	344	347	465
Acre-ft.	13160	5980	4250	4390	3890	6000	25680	55360	55340	32660	36940	42890

Total run-off for water year 1937-38=286,500 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Waterton, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	585	185	72	5.0	2	3.6	10	61	489	156	403	126
2....	719	190	59	8.0	2	1.8	15	65	318	210	363	161
3....	683	125	61	9.0	3	3.6	38	57	282	275	275	152
4....	683	120	57	8.0	4	2.8	33	65	116	221	135	144
5....	515	200	45	4.8	5	3.2	28	165	82	221	122	210
6....	524	126	36	7.0	4	11	35	221	49	282	190	156
7....	471	116	42	5.0	4	7.0	45	245	33	239	275	144
8....	355	80	40	5.0	3	2.4	30	251	23	215	257	152
9....	347	70	82	5.0	3	3.6	38	297	28	205	245	161
10....	200	72	72	9.0	4	6.0	45	311	24	221	233	109
11....	148	70	53	16	5	6.0	61	215	12	347	161	90
12....	148	65	40	10	5	4.8	96	245	78	325	106	82
13....	139	61	36	4.4	5	4.0	122	347	170	489	70	78
14....	175	78	23	1.8	4	5.2	122	403	170	550	68	72
15....	139	75	24	1.2	3	6.0	122	462	59	506	63	75
16....	148	70	23	1.6	3	1.6	190	506	13	215	78	49
17....	148	68	22	5.2	3	4.0	257	559	13	210	245	42
18....	148	70	20	5.2	3	4.4	175	585	17	227	215	55
19....	148	59	15	4.8	3	10	297	480	47	210	185	51
20....	180	51	17	6.0	2	3.6	185	471	139	195	311	40
21....	161	68	6	7.0	5.0	3.6	78	403	119	148	152	31
22....	126	53	4	4.0	4.8	2.4	106	387	139	135	82	36
23....	148	57	4.4	5.0	4.8	10	109	387	106	139	51	31
24....	156	31	2.8	5.0	8.0	2.4	96	282	88	148	53	38
25....	161	26	4.8	4.0	8.0	3.6	100	251	106	126	82	30
26....	175	36	7.0	2.0	7.0	1.6	82	257	318	161	122	26
27....	175	40	2.0	4.0	5.6	2.0	72	340	122	239	109	22
28....	175	42	6.0	3.0	5.6	10	156	445	119	289	109	13
29....	180	36	8.0	2.0	....	20	119	282	195	506	156	14
30....	180	36	8.0	2.0	....	9.0	65	325	139	282	144	23
31....	175	....	6.0	2.0	....	13	....	471	....	257	221	....
Total	8415	2376	898.0	162.0	118.8	172.2	2927	9841	3613	7949	5281	2413
Mean.	271	79.2	29.0	5.23	4.24	5.55	97.6	317	120	256	170	80.4
Max.	719	200	82	16	8	20	297	585	489	550	403	210
Min.	126	26	2	1.2	2	1.6	10	57	12	126	51	13
Acre-ft.	16690	4710	1780	321	236	342	5810	19520	7170	15770	10470	4790

Total run-off for water year 1936-37=87,616 acre-feet.

Discharge of South Platte River at Waterton, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	59	33	18	2.4	0.9	0.1	4.4	480	683	112	411	533
2....	59	36	21	2.0	0.9	0.1	3.6	355	683	269	395	960
3....	90	35	22	8.0	1.3	0.2	4.4	355	710	289	263	1180
4....	53	31	14	17	0.4	1.3	4.8	515	736	215	195	870
5....	33	35	8.0	2.0	1.1	2.4	10	701	603	161	175	772
6....	31	26	7.0	1.8	0.6	0.9	42	639	533	227	363	559
7....	30	16	12	1.6	0.6	0.7	26	665	411	297	257	462
8....	35	16	26	6.0	0.2	0.4	11	674	445	251	363	462
9....	35	14	47	1.8	0.2	0.7	20	701	683	221	233	355
10....	31	16	47	1.5	0.2	0.6	33	754	834	215	311	282
11....	33	17	35	1.6	0.2	1.1	31	808	772	239	541	347
12....	31	15	38	1.6	0.2	0.9	27	861	347	210	656	790
13....	78	9.0	28	0.9	0.2	1.1	35	817	363	205	754	719
14....	72	5.6	26	3.2	0.2	2.8	239	790	289	275	924	506
15....	35	5.6	14	11	0.2	1.5	559	736	239	419	692	427
16....	40	2.4	9.0	16	1.1	1.1	379	745	239	453	621	411
17....	55	2.0	16	22	1.5	0.2	275	603	190	471	462	395
18....	51	4.8	16	16	0.2	0.4	180	489	165	453	282	282
19....	53	12	45	22	0.4	0.2	403	411	135	395	227	403
20....	49	20	30	18	0.2	0.1	533	347	275	427	210	269
21....	49	33	31	1.6	0.2	0.2	489	395	480	311	148	210
22....	78	23	40	1.1	0.2	0.2	275	612	387	269	119	195
23....	75	4.8	4.0	2.0	0.4	0.2	275	603	340	263	96	170
24....	49	8.0	2.0	0.9	0.2	13	269	471	205	233	100	161
25....	49	4.4	33	0.9	0.2	31	126	371	175	297	112	139
26....	35	3.2	27	4.8	0.4	42	180	395	180	325	559	103
27....	55	12	3.2	1.6	0.2	30	445	480	156	318	745	200
28....	40	17	3.2	0.9	0.1	33	205	568	185	489	799	190
29....	43	11	16	5.2	....	45	347	763	185	506	630	185
30....	47	11	35	4.8	....	51	395	790	205	289	648	200
31....	40	....	14	3.6	....	11	....	665	....	347	395	....
Total	1513	478.8	687.4	205.4	12.7	273.4	5826.2	18559	11833	9451	12686	12737
Mean.	48.8	16.0	22.2	6.63	0.45	8.82	194	599	394	305	409	425
Max.	90	36	47	24	1.5	51	559	861	834	506	924	1180
Min.	30	2.0	2.0	0.9	0.1	0.1	3.6	347	135	112	96	103
Acre-ft.	3000	950	1360	407	25	542	11560	36810	23470	18750	26160	25260

Total run-off for water year 1937-38=147,300 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Denver, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	487	222	106	43	59	75	87	77	1020	317	291	194
2....	644	218	143	40	65	82	81	74	1740	286	328	186
3....	614	198	143	50	71	83	81	103	1220	312	271	322
4....	568	166	129	63	79	62	92	109	919	360	182	291
5....	548	261	112	59	95	67	92	136	760	317	103	251
6....	568	242	98	37	72	72	81	232	591	271	84	389
7....	514	232	98	32	74	70	119	305	541	412	202	276
8....	449	194	98	32	46	78	126	306	527	271	232	237
9....	418	174	109	38	50	83	109	317	494	242	222	232
10....	395	182	133	46	55	83	106	322	474	227	210	186
11....	389	178	116	51	61	80	112	333	377	302	190	126
12....	377	170	109	54	77	70	103	344	322	372	133	101
13....	333	182	147	57	77	65	133	350	406	468	151	87
14....	307	190	126	56	81	50	140	355	455	507	112	72
15....	256	182	123	54	84	50	155	401	520	500	81	77
16....	261	170	129	55	74	55	178	430	251	355	63	77
17....	251	170	119	46	59	55	360	500	186	206	143	72
18....	237	162	92	45	77	60	468	527	147	256	372	79
19....	232	162	84	43	81	60	418	449	129	256	210	87
20....	333	140	87	40	66	60	430	430	210	222	271	77
21....	281	136	77	34	55	65	423	401	206	182	210	63
22....	261	143	77	36	72	66	333	366	194	147	129	57
23....	256	126	72	39	89	70	281	350	162	147	92	57
24....	242	129	70	45	87	70	276	338	133	151	59	57
25....	261	103	68	47	87	63	261	291	261	151	61	63
26....	256	101	70	50	63	66	246	317	629	140	103	68
27....	256	101	68	51	59	68	194	281	514	174	129	66
28....	261	101	66	51	66	72	178	307	377	256	133	63
29....	251	95	68	50	....	87	147	296	500	344	140	63
30....	237	89	61	57	....	89	98	322	436	344	214	57
31....	222	....	41	61	....	87	....	494	....	242	355	....
Total	10965	4919	3039	1462	1981	2163	5909	9864	14701	8737	5476	4033
Mean.	354	164	98.0	47.2	70.8	69.8	197	318	490	282	177	134
Max..	644	261	147	63	95	89	468	527	1740	507	372	389
Min...	222	89	41	32	46	50	81	74	129	140	59	57
Acre-ft.	21750	9760	6030	2900	3930	4290	11720	19560	29160	17330	10860	8000

Total run-off for water year=145,300 acre-feet.

Discharge of South Platte River at Denver, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	81	133	77	74	57	52	81	1230	1190	360	442	768
2....	112	136	89	77	63	50	81	1200	1130	317	449	1250
3....	129	140	98	74	57	55	77	1340	1040	424	377	2950
4....	151	129	92	74	55	68	70	1490	1030	436	307	2330
5....	106	119	84	77	52	50	66	1820	966	338	232	1790
6....	98	112	79	63	46	52	92	1660	821	256	302	1270
7....	98	106	79	57	50	61	123	1620	742	412	338	1020
8....	103	101	70	57	55	50	92	1620	652	372	355	1020
9....	103	98	55	63	54	57	79	1480	717	312	317	919
10....	98	92	74	57	52	52	87	1550	847	312	291	751
11....	95	95	106	55	52	50	92	1650	975	333	684	838
12....	87	92	129	55	52	61	84	1790	652	286	614	1540
13....	103	92	140	55	50	52	81	1820	520	286	652	1520
14....	159	89	109	55	46	72	232	1880	507	383	786	1120
15....	159	87	106	63	48	98	693	1770	442	583	777	1040
16....	143	87	98	72	43	79	652	1900	442	534	636	966
17....	162	81	98	74	45	72	554	1630	389	614	660	909
18....	174	74	89	72	54	68	561	1270	350	527	449	795
19....	162	81	81	74	54	61	676	1100	655	474	350	734
20....	159	81	84	70	54	57	947	1020	679	468	307	701
21....	150	98	79	50	52	52	938	1200	742	424	286	561
22....	170	123	79	50	54	70	709	1520	676	389	232	527
23....	182	112	79	52	55	54	591	1630	652	350	206	487
24....	182	98	79	43	61	50	527	1430	693	338	136	468
25....	155	92	74	43	61	84	481	1140	455	338	218	430
26....	133	89	74	52	54	116	418	1090	494	383	554	418
27....	112	84	72	52	50	109	1260	1070	455	424	1280	436
28....	147	87	77	54	50	101	1010	1070	455	436	190	468
29....	116	87	77	48	....	101	882	1580	420	760	994	436
30....	123	77	87	37	....	136	975	1710	462	412	994	430
31....	140	....	98	50	....	119	....	1630	....	366	621	....
Total	4101	2972	2712	1849	1476	2207	13211	45910	20260	12647	16746	28872
Mean.	132	99.1	87.5	59.6	52.7	71.3	440	1481	675	408	540	862
Max..	182	140	140	77	63	136	1260	1900	1190	760	1900	2950
Min...	81	74	55	37	43	50	66	1020	350	256	136	418
Acre-ft.	8130	5890	5380	3670	2930	4380	26200	91060	40190	25080	33220	57270

Total run-off for water year 1937-38=303,400 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Henderson, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	356	138	65	102	150	174	69	105	832	768	286	237
2....	485	135	70	100	147	181	62	78	1990	637	322	171
3....	518	154	69	110	154	184	65	70	1350	552	296	261
4....	446	164	69	120	160	158	70	97	944	524	219	286
5....	397	204	76	117	168	161	74	118	792	453	125	246
6....	440	232	76	108	184	171	67	196	485	410	101	333
7....	379	219	65	106	170	168	87	322	261	572	123	270
8....	317	174	64	109	144	177	114	373	296	478	133	215
9....	286	116	64	118	148	181	110	362	345	453	121	181
10....	270	101	65	126	152	181	93	434	246	472	101	161
11....	232	99	59	134	159	181	78	459	237	498	97	133
12....	211	99	53	138	177	118	60	350	280	792	93	103
13....	223	99	49	142	184	116	58	322	385	768	105	83
14....	181	99	46	145	171	97	58	440	466	674	105	95
15....	148	89	44	142	171	83	59	608	744	615	125	125
16....	148	81	42	140	164	79	67	644	356	504	118	121
17....	135	74	58	136	158	78	125	652	256	275	138	110
18....	125	72	116	132	174	78	422	608	270	339	345	103
19....	130	76	121	132	184	93	459	565	246	368	204	105
20....	223	76	123	126	161	99	586	453	261	280	158	105
21....	265	69	116	125	143	87	498	434	350	232	188	103
22....	232	69	116	124	158	87	403	446	403	116	114	101
23....	184	69	112	124	184	85	524	478	545	105	95	110
24....	174	67	114	126	177	78	373	498	511	164	110	114
25....	188	69	116	134	184	78	261	385	701	174	99	121
26....	181	69	116	136	184	76	177	446	1530	154	118	118
27....	164	67	114	140	184	76	158	368	1010	168	141	101
28....	192	72	114	140	174	72	161	368	705	312	135	97
29....	161	99	116	140	....	67	151	579	784	504	116	93
30....	135	72	108	140	....	72	138	936	864	478	188	87
31....	128	....	103	146	....	70	....	760	....	350	265	....
Total	7654	3223	2639	3958	4668	3606	5627	12960	18445	13189	4884	4489
Mean.	247	107	85.1	128	167	116	188	418	615	425	158	150
Max.	518	232	123	146	184	184	586	936	1990	792	345	333
Min.	125	67	42	100	143	67	58	70	237	105	93	83
Acre-ft.	15180	6390	5230	7850	9260	7150	11160	25710	36590	26160	9690	8900

Total run-off for water year 1936-37=169,300 acre-feet.

Discharge of South Platte River at Henderson, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	95	73	78	84	123	164	123	896	1570	674	345	800
2....	78	70	63	70	145	112	120	1070	1330	524	301	1120
3....	73	89	61	63	154	100	109	1350	1290	744	280	3360
4....	73	92	61	78	164	95	92	1720	1540	728	215	2750
5....	76	78	56	73	171	84	87	1580	1660	659	192	2000
6....	87	70	48	70	161	73	154	1550	1590	524	200	1330
7....	48	65	54	54	164	65	112	1650	1380	644	317	880
8....	48	54	73	48	181	61	92	1500	1120	565	312	800
9....	56	54	56	38	184	63	81	1340	1200	491	306	690
10....	54	50	81	40	174	61	65	1360	1500	446	275	504
11....	52	46	65	42	181	57	54	1420	1670	524	776	504
12....	54	65	70	40	174	56	48	1560	1510	478	644	1370
13....	61	139	84	50	168	56	36	1700	1360	434	622	1780
14....	92	132	70	42	161	56	106	1630	1340	545	690	1210
15....	117	76	65	36	168	61	752	1610	987	808	816	1020
16....	126	70	59	38	168	59	608	1700	832	728	558	1030
17....	106	103	63	38	164	57	362	1620	784	784	594	987
18....	120	112	65	46	171	56	296	1460	728	720	428	888
19....	114	103	73	44	168	56	373	1280	531	637	280	728
20....	100	129	61	54	177	52	880	1160	840	538	196	697
21....	95	142	61	89	168	50	705	1880	1430	472	181	518
22....	112	139	63	117	171	50	579	2220	1470	403	174	391
23....	120	126	59	136	171	52	422	2190	1810	373	174	312
24....	92	120	73	122	181	103	362	1940	1590	333	168	246
25....	87	89	87	136	181	132	379	1660	1050	362	177	158
26....	81	92	68	129	174	196	270	1470	1070	368	608	84
27....	70	109	81	136	171	211	1320	1490	912	504	888	63
28....	70	98	61	139	168	200	1270	1560	840	498	2830	65
29....	76	103	57	139	....	188	712	1850	705	872	1170	200
30....	65	95	63	136	....	192	776	3480	880	478	1110	296
31....	68	....	70	126	....	136	....	2420	....	312	784	....
Total	2566	2783	2049	2463	4706	2954	11345	51316	36519	17170	16611	26781
Mean.	82.8	92.8	66.1	79.5	168	95.3	378	1655	1217	554	536	893
Max.	126	142	87	139	184	211	1320	3480	1810	872	2830	3360
Min.	48	46	48	36	123	50	36	896	531	312	168	63
Acre-ft.	5090	5520	4060	4890	9330	5860	22560	101800	72430	34060	32950	53120

Total run-off for water year 1937-38=351,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Fort Lupton, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	392	193	121	240	240	232	96	66	668	788	218	276
2....	396	235	116	235	245	246	94	63	1730	662	253	144
3....	452	228	116	235	248	253	87	61	1610	548	276	221
4....	430	225	106	238	254	239	91	59	1220	491	218	284
5....	401	246	116	260	265	228	101	68	1250	441	114	308
6....	406	295	119	264	270	232	91	72	748	355	61	333
7....	387	280	127	250	275	232	114	163	406	458	63	299
8....	312	261	124	245	270	207	173	239	337	485	76	250
9....	276	186	121	235	265	210	179	239	406	441	66	210
10....	253	144	119	230	239	235	160	257	320	420	59	176
11....	239	136	119	230	214	235	141	308	253	425	54	114
12....	228	138	111	225	239	200	101	218	320	603	48	63
13....	232	150	111	220	261	133	89	170	333	629	48	54
14....	207	150	108	218	250	138	78	246	446	542	61	50
15....	176	150	116	220	243	121	74	378	811	491	61	72
16....	173	130	121	220	232	119	74	392	474	468	57	74
17....	163	127	130	220	235	111	103	425	308	280	61	66
18....	186	127	239	215	239	111	411	406	265	284	200	59
19....	210	121	261	210	250	133	480	446	257	320	235	63
20....	268	150	272	205	225	136	636	378	214	250	124	66
21....	382	147	261	200	207	147	597	355	272	147	179	61
22....	295	136	272	200	221	108	425	350	329	70	116	55
23....	272	141	276	205	257	121	536	333	416	48	63	54
24....	250	138	268	210	243	96	368	312	426	61	68	65
25....	265	138	265	215	265	119	253	308	450	114	61	76
26....	342	130	253	215	239	106	179	401	1790	119	80	119
27....	253	124	253	215	207	103	163	329	1290	114	101	78
28....	257	136	252	215	221	116	111	276	726	193	116	65
29....	232	214	255	220	....	108	76	496	648	416	78	61
30....	218	166	260	220	....	108	74	772	844	420	172	61
31....	193	....	255	230	....	103	....	697	....	312	228	....
Total	8746	5142	5643	6960	6819	4986	6155	9283	19577	11395	3616	3877
Mean	282	171	182	225	244	161	205	299	653	368	117	129
Max.	452	295	....	....	....	253	636	772	1790	788	276	333
Min.	163	121	....	....	....	96	74	59	214	48	48	50
Acres-ft.	17350	10200	11190	13800	13530	9890	12210	18410	38830	22600	7170	7690

Total run-off for water year 1936-37=182,900 acre feet.

Discharge of South Platte River at Fort Lupton, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	67	51	134	100	235	199	129	673	1870	673	376	750
2....	54	76	120	98	228	146	120	995	1510	536	364	933
3....	76	134	122	96	215	100	106	1150	1360	659	347	2900
4....	58	146	115	100	209	92	92	2100	1560	687	248	3790
5....	65	120	109	100	205	81	76	1640	1630	680	196	2460
6....	47	124	124	96	182	72	134	1570	1640	550	169	1530
7....	47	117	111	79	180	60	102	1630	1470	590	266	1000
8....	45	87	96	81	194	72	94	1450	1180	556	244	857
9....	50	58	89	106	199	81	92	1270	1180	466	248	793
10....	60	56	98	106	209	76	87	1260	1350	423	235	694
11....	60	48	124	96	209	70	77	1310	1580	460	485	597
12....	57	51	138	67	209	70	67	1450	1510	429	556	1180
13....	56	166	156	96	199	72	58	1580	1350	364	610	1890
14....	76	196	134	96	199	67	79	1550	1360	429	645	1420
15....	122	124	129	102	199	79	882	1550	1090	610	801	1080
16....	141	106	129	113	185	74	694	1600	899	556	659	1070
17....	158	153	120	115	182	67	497	1550	793	536	645	986
18....	146	177	120	106	185	67	341	1350	729	543	478	849
19....	196	182	109	94	196	72	325	1280	673	435	341	729
20....	166	194	111	83	194	65	882	1070	701	364	244	708
21....	143	196	106	166	196	57	701	1760	1220	315	202	624
22....	146	202	104	191	202	57	645	2130	1260	294	182	497
23....	124	194	102	205	202	63	429	2300	1530	289	148	393
24....	126	191	104	196	196	120	325	1960	1510	275	164	336
25....	117	182	100	166	196	156	261	1660	1040	299	120	275
26....	106	171	98	202	191	212	239	1440	977	289	429	225
27....	74	180	92	205	191	235	1000	1410	865	353	833	200
28....	60	169	98	202	188	222	1260	1420	771	336	1710	188
29....	72	166	98	194	....	228	563	1600	680	610	1130	279
30....	56	166	102	151	....	209	583	2650	715	576	1030	405
31....	51	....	109	191	....	153	....	2600	....	347	865	....
Total	2822	4183	3501	3690	5775	3394	10940	48958	36003	14529	14970	29640
Mean	91.0	139	113	129	199	109	365	1579	1200	469	483	888
Max.	196	202	156	205	235	235	1260	2650	1870	687	1710	3790
Min.	45	48	89	67	180	57	58	673	673	275	120	188
Acres-ft.	5600	8300	6940	7930	11060	6730	21700	97110	71410	28820	29690	58790

Total run-off for water year 1937-38=354,100 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River Near Kersey, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	800	722	550	653	550	566	350	369	202	814	124	175
2....	584	702	550	618	560	595	346	318	111	722	119	169
3....	533	722	544	615	570	612	336	293	765	550	117	148
4....	624	728	544	610	570	612	328	247	1010	408	104	124
5....	647	728	550	600	565	606	332	161	1160	323	98	379
6....	624	722	555	570	580	606	341	113	1110	269	119	314
7....	647	728	550	520	595	612	364	88	702	161	131	198
8....	647	722	550	440	590	606	388	79	469	94	135	178
9....	612	696	550	435	550	589	403	77	453	68	113	166
10....	578	658	561	430	474	584	398	77	566	60	113	135
11....	566	624	566	425	516	584	369	67	506	60	104	124
12....	544	589	584	425	555	578	350	60	379	63	96	138
13....	522	572	589	428	595	511	332	56	341	74	96	158
14....	516	572	584	430	635	448	323	48	314	86	100	158
15....	490	561	572	438	647	428	314	44	495	98	109	158
16....	453	561	566	435	624	418	305	41	884	92	102	156
17....	423	555	584	435	606	418	305	40	683	100	96	150
18....	473	544	601	435	612	433	336	42	484	115	86	128
19....	418	538	624	432	629	464	358	42	374	183	86	111
20....	433	538	664	425	624	474	528	44	328	189	88	111
21....	544	538	683	420	584	458	612	45	233	169	88	104
22....	716	538	683	420	561	433	584	52	229	102	88	104
23....	735	533	676	423	589	413	572	60	156	85	94	100
24....	709	522	683	425	624	403	696	65	94	86	98	100
25....	670	506	676	428	612	388	683	67	81	83	96	102
26....	690	506	676	430	612	384	584	65	398	85	109	102
27....	748	500	670	440	561	374	474	70	1730	83	128	109
28....	780	506	664	450	550	364	423	72	1920	85	148	109
29....	780	506	653	475	....	379	403	68	1190	94	172	109
30....	774	528	653	500	....	360	379	81	870	113	178	115
31....	754	....	664	530	....	360	....	189	....	117	186	....
Total	18974	17965	18819	14740	16340	15060	12516	3140	18237	5631	3521	4432
Mean..	612	599	607	475	584	486	417	101	608	182	114	148
Max...	800	728	683	....	....	612	696	369	1920	814	186	379
Min...	413	500	544	....	....	360	305	40	81	60	86	100
Acre-ft.	37630	35630	37330	29240	32410	29870	24830	6230	36170	11170	6930	8790

Total run-off for the water year 1936-37=296,300 acre-feet.

Discharge of South Platte River Near Kersey, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	126	180	451	420	525	506	338	870	2580	700	122	371
2....	124	228	433	424	497	501	322	948	1630	736	116	358
3....	124	216	406	428	521	482	322	1100	1130	780	120	2020
4....	122	204	406	424	540	446	310	1580	774	736	116	13400
5....	116	195	478	410	545	442	296	2090	884	664	106	14200
6....	116	195	497	410	530	433	310	1770	1050	464	112	7670
7....	118	195	492	415	516	415	322	1730	1090	267	112	4590
8....	118	210	487	380	506	410	380	1710	1010	198	104	2840
9....	118	207	464	388	521	410	384	1550	835	178	100	2370
10....	118	210	451	410	540	402	363	1300	742	186	106	1990
11....	118	210	451	406	551	402	322	1180	1110	163	124	1880
12....	120	213	487	388	545	397	299	1160	1380	160	134	2370
13....	120	250	582	367	530	402	267	1250	1410	149	145	3490
14....	120	288	582	393	521	393	250	1380	1430	130	138	4000
15....	126	384	556	410	511	384	318	1400	1390	126	130	3010
16....	126	388	525	438	501	376	801	1440	1140	195	128	2560
17....	156	363	501	456	478	363	808	1440	956	338	132	2300
18....	189	376	497	460	501	346	676	1380	920	456	132	2070
19....	201	388	492	464	511	322	598	1450	863	640	168	1860
20....	219	433	478	460	516	310	652	1350	688	456	176	1650
21....	222	497	469	442	530	296	898	1450	706	307	219	1500
22....	213	530	442	469	511	299	870	2220	970	234	231	1300
23....	210	530	456	501	516	299	821	2790	1570	210	222	1040
24....	198	525	451	516	516	288	724	3080	1980	210	186	905
25....	186	506	433	478	521	277	646	2760	1640	198	178	828
26....	173	492	433	451	521	288	566	2390	1400	173	160	694
27....	168	482	424	497	511	314	608	2140	1300	154	143	582
28....	168	474	402	530	506	342	1240	2010	1030	140	138	478
29....	163	469	402	535	....	354	1370	1960	814	136	948	397
30....	168	464	410	506	....	354	920	2230	640	120	551	350
31....	173	....	415	492	....	342	....	2840	....	140	402	....
Total	4737	10302	14453	13768	14538	11595	17001	53948	35062	9744	5887	83073
Mean..	153	343	466	444	519	374	567	1740	1169	314	190	2769
Max...	222	530	582	535	551	506	1370	3080	2580	780	948	14200
Min...	116	180	402	367	478	277	250	870	640	120	100	350
Acre-ft.	9400	20430	28670	27310	28840	23000	33720	107000	69540	19330	11680	164800

Total run-off for the water year 1937-38=543,700 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Sublette, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	942	79	64	56	57	124	107	383	206	962	154	132
2....	747	78	64	58	56	128	102	353	230	896	154	124
3....	595	84	62	70	55	126	96	323	255	796	162	124
4....	510	83	60	76	52	122	89	294	555	630	157	122
5....	466	76	63	63	55	122	96	252	661	510	154	150
6....	442	71	60	62	55	126	148	206	846	426	150	298
7....	426	74	60	59	56	128	150	182	661	326	159	261
8....	430	74	62	62	56	128	239	164	471	239	164	221
9....	422	70	60	60	57	130	383	145	315	218	157	195
10....	375	79	58	58	60	128	224	148	201	204	152	184
11....	239	84	59	56	54	128	206	148	174	195	143	176
12....	206	80	62	54	59	145	195	141	164	209	134	164
13....	190	79	62	53	62	496	184	134	242	218	132	157
14....	187	79	60	53	60	560	215	128	338	218	138	138
15....	184	74	62	56	65	560	258	122	410	218	138	128
16....	179	71	57	57	68	575	301	122	454	206	136	118
17....	169	70	52	56	58	575	326	120	338	190	141	114
18....	164	68	52	57	54	565	338	120	212	192	134	114
19....	206	64	52	58	55	600	372	120	242	204	134	109
20....	190	64	50	59	57	580	479	120	345	230	136	116
21....	105	76	49	62	55	570	523	135	330	224	138	128
22....	90	64	53	63	55	560	605	150	305	206	138	134
23....	80	65	52	70	76	552	640	192	248	182	132	138
24....	82	66	50	65	122	546	678	201	195	172	136	141
25....	80	66	53	59	120	538	735	209	176	164	136	141
26....	79	62	55	60	124	530	666	159	215	182	130	143
27....	80	62	53	59	130	528	528	143	625	184	136	145
28....	82	63	53	57	128	505	438	148	1820	184	126	154
29....	79	62	55	60	....	323	430	159	1630	182	130	162
30....	78	62	56	58	....	132	406	164	1140	176	132	159
31....	79	....	54	54	....	120	....	162	....	179	132	....
Total	8183	2149	1764	1850	1961	10950	10157	5547	14004	9322	4395	4590
Mean.	264	71.6	56.9	59.7	70.0	353	339	179	467	301	142	153
Max..	942	84	64	76	130	600	735	383	1820	962	164	298
Min..	78	62	49	53	52	120	89	120	164	164	126	109
Acre-ft.	16230	4260	3500	3670	3890	21720	20150	11000	27780	18490	8750	9100

Total run-off for water year 1936-37=148,500 acre-feet.

Discharge of South Platte River at Sublette, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	153	275	75	49	47	48	85	147	1670	608	192	375
2....	116	312	84	49	46	48	114	138	1070	654	176	257
3....	110	348	66	45	45	45	228	153	644	639	174	424
4....	104	344	63	49	46	45	344	220	699	669	174	1670
5....	98	351	63	49	45	51	350	293	644	659	179	9400
6....	100	351	60	49	48	50	256	260	699	608	186	9700
7....	93	341	61	48	49	49	220	206	806	470	186	6600
8....	93	348	64	49	54	50	195	222	876	392	200	3580
9....	102	266	69	49	54	53	192	192	840	337	197	1460
10....	94	189	80	51	48	49	186	158	734	315	197	759
11....	89	162	63	53	45	49	167	138	714	302	203	554
12....	91	151	43	61	48	54	203	125	1020	299	203	625
13....	91	142	45	66	46	51	254	116	1110	287	228	1180
14....	89	133	42	50	45	61	254	116	1110	281	231	2110
15....	89	125	44	49	49	120	287	133	1110	272	239	2010
16....	89	131	48	48	44	129	328	293	834	231	299	1110
17....	91	110	49	44	46	169	445	375	542	260	293	749
18....	87	75	51	54	47	184	442	625	416	324	222	538
19....	87	75	50	49	45	234	420	496	365	392	197	392
20....	100	108	43	43	44	225	424	534	382	452	208	460
21....	104	116	45	43	43	248	499	719	344	375	217	664
22....	114	94	47	54	46	254	510	1150	358	328	179	574
23....	118	84	45	51	49	254	496	1000	503	302	197	478
24....	110	82	42	48	43	254	420	1450	852	281	197	302
25....	94	69	46	50	45	248	337	1320	1050	269	186	239
26....	82	64	48	53	50	254	402	1500	870	266	208	225
27....	80	72	54	45	48	254	438	1670	958	245	200	365
28....	82	70	64	46	45	287	231	1700	876	225	272	361
29....	120	66	53	51	....	321	179	1620	654	217	344	299
30....	122	72	46	48	....	228	160	1600	714	203	689	290
31....	172	....	45	48	....	106	....	1840	....	186	463	....
Total	3164	5126	1698	1541	1310	4472	9166	20509	23464	11348	7336	47750
Mean.	102	171	54.8	49.7	46.8	144	306	662	782	366	237	1592
Max..	172	351	84	66	54	321	510	1840	1670	669	689	9700
Min..	80	64	42	43	43	45	85	116	344	186	174	225
Acre-ft.	6280	10170	3370	3060	2600	8870	18180	40680	46540	22510	14550	94710

Total run-off for water year 1937-38=271,500 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Balzac, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	318	9.6	9.2	17	10	14	17	228	220	262	154	450
2....	340	9.2	9.1	13	9.7	14	16	218	193	262	163	214
3....	297	9.7	8.1	12	9.2	17	17	207	164	308	176	200
4....	240	9.2	8.8	12	9.2	16	16	195	189	297	165	436
5....	214	8.7	9.9	13	12	11	15	165	194	234	159	202
6....	248	9.3	8.9	13	13	10	15	130	190	176	142	182
7....	242	10	10	11	13	9.9	15	135	205	147	114	211
8....	247	9.3	9.5	11	13	9.4	14	193	263	130	123	198
9....	267	8.3	9.5	11	13	9.6	14	191	155	122	136	145
10....	276	8.7	8.9	11	13	9.4	17	152	50	126	138	132
11....	246	8.8	9.3	11	13	9.1	15	112	39	115	135	161
12....	123	8.2	9.5	10	13	11	15	89	46	143	129	194
13....	54	8.4	8.9	10	13	13	29	90	136	149	129	215
14....	41	8.6	8.9	10	13	12	88	101	106	144	134	217
15....	34	8.2	9.4	11	13	11	70	95	110	132	147	214
16....	32	8.1	9.4	11	13	12	86	129	125	135	147	194
17....	32	8.5	8.8	10	13	11	124	137	135	142	145	179
18....	29	8.7	9.2	9.2	12	11	150	129	166	158	143	175
19....	27	8.4	9.3	9.1	13	12	162	118	122	178	134	169
20....	28	8.3	8.8	8.8	13	14	162	115	106	156	136	156
21....	30	8.7	8.8	9.3	13	13	179	116	104	150	141	146
22....	27	9.0	9.1	10	12	13	212	116	129	140	126	148
23....	27	8.9	9.1	12	12	14	273	120	193	133	123	146
24....	26	9.0	8.7	12	12	14	324	111	199	141	113	146
25....	25	8.9	9.2	13	12	13	330	112	177	152	120	154
26....	24	8.2	9.7	14	15	16	363	845	177	150	101	155
27....	24	8.5	9.4	13	17	23	362	275	182	149	93	152
28....	19	9.0	9.0	13	17	22	329	189	211	144	118	155
29....	11	8.5	9.7	13	....	20	270	235	293	160	133	159
30....	11	8.8	10	13	....	20	232	272	376	162	149	160
31....	10	....	13	11	....	19	....	231	....	167	150	....
Total	3569	263.7	289.1	357.4	354.1	423.4	393.1	555.1	495.5	516.4	421.6	576.5
Mean.	115	8.79	9.33	11.5	12.6	13.7	131	179	165	167	136	192
Max..	340	10	13	17	17	23	363	845	376	308	176	450
Min..	10	8.1	8.1	8.8	9.2	9.1	14	89	39	115	93	132
Acre-ft.	7080	523	573	709	702	840	7800	11010	9830	10240	8360	11430

Total run-off for for water year 1936-37==69,100 acre-feet.

Discharge of South Platte River at Balzac, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	151	55	17	18	17	10	126	50	180	171	136	966
2....	149	53	15	16	16	11	124	36	94	200	119	738
3....	144	52	13	14	12	11	123	28	142	211	127	1070
4....	130	47	14	14	12	11	126	21	343	246	140	1370
5....	115	47	14	17	13	12	132	13	329	255	149	3230
6....	111	59	11	13	11	11	135	13	327	225	147	2880
7....	107	68	11	13	11	11	122	13	343	188	173	8000
8....	103	69	12	16	11	13	117	10	496	162	196	10000
9....	103	72	10	12	12	33	115	7.8	559	148	199	3220
10....	102	80	10	10	9.8	36	108	12	593	136	207	1320
11....	97	75	12	11	10	38	103	42	507	134	284	829
12....	92	67	11	14	11	38	103	40	464	134	202	783
13....	91	68	8.8	14	10	39	117	18	578	146	249	3090
14....	91	86	13	15	10	40	130	8.0	678	221	211	2720
15....	111	95	13	17	12	42	145	5.2	727	296	220	1910
16....	131	101	9.2	14	13	44	155	25	674	271	226	1550
17....	140	138	10	11	12	46	156	175	385	536	225	536
18....	137	152	13	11	12	61	148	166	406	406	291	158
19....	137	127	11	11	12	73	144	210	123	326	230	89
20....	114	119	8.6	10	10	45	145	182	86	308	218	77
21....	114	55	9.2	10	8.0	82	128	193	66	320	235	52
22....	127	38	11	13	8.6	107	134	183	58	273	202	56
23....	154	31	9.0	10	10	140	153	119	117	228	176	51
24....	161	28	30	10	9.4	170	159	96	183	187	183	59
25....	200	24	107	12	10	191	144	84	220	191	186	24
26....	190	21	91	15	11	171	126	75	352	198	896	17
27....	160	22	60	13	10	167	118	48	331	160	1630	11
28....	120	18	39	13	10	160	1900	71	289	149	506	19
29....	81	17	36	14	....	155	479	148	257	157	566	87
30....	73	17	20	15	....	149	66	180	203	156	539	108
31....	59	....	18	14	....	134	....	49	....	152	1380	....
Total	3795	1901	660.8	410	313.8	2282	598.1	2321.0	986.7	689.1	1044.8	4508.0
Mean.	122	63.4	21.3	13.2	11.2	73.6	199	74.9	329	222	337	1503
Max..	200	152	107	18	17	191	1900	210	727	536	1630	10000
Min..	59	17	8.6	10	8.0	10	66	5.2	58	134	119	11
Acre-ft.	7530	3770	1310	813	622	4530	11860	4600	19570	13670	20720	89410

Total run-off for water year 1937-38==178,400 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Julesburg, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	33	62	71	74	198	291	242	40	40	31	24	25
2....	33	66	70	75	213	274	231	40	52	28	24	24
3....	32	64	86	77	223	262	225	39	46	27	27	25
4....	34	93	82	82	235	259	193	42	46	28	27	26
5....	37	124	88	80	258	250	169	40	45	25	27	30
6....	50	121	88	70	286	233	146	40	42	25	27	35
7....	66	109	81	74	297	221	126	40	39	24	26	39
8....	83	102	101	83	289	180	111	38	51	24	26	39
9....	102	118	107	101	279	157	92	44	159	24	26	35
10....	116	100	116	129	286	140	84	43	161	24	26	33
11....	109	92	130	154	297	127	82	37	118	24	29	35
12....	89	88	135	171	572	124	76	36	92	25	32	34
13....	79	86	134	178	613	125	76	34	77	25	32	29
14....	75	82	129	182	612	148	68	34	68	25	32	29
15....	70	78	134	180	526	182	60	40	67	25	30	28
16....	65	76	138	174	455	205	60	40	62	25	30	27
17....	62	76	133	172	418	200	58	40	60	31	29	27
18....	64	72	130	175	388	195	58	34	55	43	29	27
19....	59	63	127	178	354	190	57	34	53	37	28	26
20....	60	64	126	168	332	205	56	34	42	28	27	25
21....	60	64	126	161	350	242	53	33	39	26	27	25
22....	60	64	123	157	349	262	53	37	36	25	26	24
23....	59	71	125	142	313	270	47	34	31	25	26	24
24....	59	65	125	146	303	169	44	34	30	28	26	25
25....	58	85	120	158	285	106	43	37	30	27	26	26
26....	58	91	123	166	304	162	43	45	35	25	24	26
27....	58	90	120	180	318	201	43	42	33	25	25	24
28....	60	70	116	195	314	230	45	40	33	24	25	26
29....	61	68	112	201	....	276	45	38	32	24	25	26
30....	61	68	110	201	....	278	45	38	30	25	25	25
31....	61	....	87	194	....	257	....	36	....	24	26	....
Total	1973	2472	3493	4478	9667	6421	2731	1183	1704	826	839	849
Mean.	63.6	82.4	113	144	345	207	91.0	38.2	56.8	26.6	27.1	28.3
Max..	116	124	138	201	613	291	242	45	161	43	32	39
Min..	32	62	70	70	198	106	43	33	30	24	24	24
Acre-ft.	3910	4900	6930	8880	19170	12740	5420	2350	3380	1640	1660	1680

Total run-off for water year 1936-37=72,660 acre-feet.

Discharge of South Platte River at Julesburg, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	25	50	126	178	262	188	39	835	537	52	46	63
2....	26	50	128	174	320	166	38	518	482	69	41	70
3....	25	50	126	173	455	159	38	427	411	110	40	220
4....	27	50	125	167	443	153	36	394	334	96	40	312
5....	33	52	119	158	460	137	39	402	297	86	38	303
6....	40	54	124	171	442	140	43	363	259	88	37	372
7....	43	54	122	171	342	142	45	339	216	73	39	475
8....	46	52	96	176	328	134	50	317	181	62	36	1230
9....	46	52	90	166	298	125	75	299	207	58	32	2550
10....	49	51	100	169	286	122	145	272	281	57	32	7130
11....	49	53	101	177	277	106	185	238	186	53	34	4780
12....	49	54	132	111	273	83	157	201	170	44	32	3470
13....	51	60	157	123	272	69	111	159	177	39	31	2540
14....	50	59	156	147	264	64	90	139	172	38	31	1940
15....	52	55	144	182	278	66	93	107	158	39	35	2020
16....	53	61	164	188	170	61	85	97	152	44	38	2920
17....	53	60	181	191	165	52	78	81	138	56	63	2210
18....	54	57	178	171	187	48	68	77	130	52	74	1700
19....	53	64	154	158	276	46	63	75	156	93	67	1320
20....	51	71	144	162	317	44	61	68	155	127	52	1140
21....	50	73	126	155	328	44	58	70	147	89	52	862
22....	51	89	143	140	306	44	52	73	126	75	52	862
23....	50	161	132	144	304	41	48	71	100	68	51	546
24....	43	212	112	136	275	39	48	80	87	54	43	456
25....	42	205	103	110	252	39	48	70	82	56	39	379
26....	42	177	108	102	244	36	52	61	81	59	39	301
27....	44	154	116	125	232	37	99	59	73	58	40	229
28....	51	143	130	179	224	38	196	56	62	56	44	232
29....	52	138	126	306	....	39	168	64	52	52	46	247
30....	52	132	138	158	....	38	285	279	50	48	72	213
31....	51	....	168	207	....	37	....	528	....	45	64	....
Total	1403	2593	4069	5075	8280	2537	2593	6819	5659	1996	1380	40912
Mean.	45.3	86.4	131	164	296	81.8	86.4	220	189	64.4	44.5	1364
Max..	54	212	181	306	460	188	285	835	537	127	74	7130
Min..	25	50	90	102	165	36	36	56	50	38	31	63
Acre-ft.	2780	5140	8070	10070	16420	5030	5140	13530	11220	3960	2740	81150

Total run-off for water year 1937-38=165,200 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Tarryall Creek Near Lake George, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	64	49	29	....	....	....	....	32	50	75	67	37
2....	55	48	....	....	....	....	....	28	28	78	46	28
3....	58	30	....	....	....	....	....	25	34	63	37	28
4....	40	30	....	....	....	....	....	24	37	51	34	34
5....	45	30	....	....	....	....	....	24	29	40	30	34
6....	48	28	....	....	....	....	....	25	26	37	31	40
7....	48	24	....	....	....	....	....	28	25	26	35	51
8....	40	21	....	....	....	....	....	25	20	22	34	47
9....	45	48	....	....	....	....	....	22	12	18	33	27
10....	46	47	....	....	....	....	39	26	10	21	24	22
11....	28	47	....	....	....	....	38	43	9.8	22	20	26
12....	32	45	....	....	....	....	41	56	7.5	59	24	24
13....	36	42	....	....	....	....	47	50	6.0	252	23	21
14....	33	40	....	....	....	....	60	49	5.6	76	22	18
15....	26	38	....	....	....	....	78	51	5.2	50	24	17
16....	34	35	....	....	....	....	76	114	6.9	36	24	17
17....	29	33	....	....	....	....	81	78	18	28	24	17
18....	20	30	....	....	....	....	82	82	18	16	41	15
19....	24	28	....	....	....	....	33	76	17	9.8	53	15
20....	41	29	....	....	....	....	45	52	14	11	35	8.7
21....	24	34	....	....	....	....	50	52	15	13	27	9.4
22....	24	27	....	....	....	....	48	61	15	17	25	9.0
23....	20	20	....	....	....	....	52	60	8.4	15	23	11
24....	20	22	....	....	....	....	67	68	9.4	13	20	12
25....	17	34	....	....	....	....	39	66	13	13	15	14
26....	38	41	....	....	....	....	31	67	160	18	53	8.1
27....	43	39	....	....	....	....	30	63	443	28	27	5.8
28....	36	45	....	....	....	....	39	63	251	45	30	9.0
29....	29	38	....	....	....	....	31	61	61	49	26	17
30....	34	27	....	....	....	....	34	70	55	256	26	14
31....	47	....	....	....	....	....	....	67	....	93	36	....
Total	1124	1049	....	....	....	....	1041	1608	1409.8	1550.8	969	636.0
Mean..	36.3	35.0	....	....	....	....	49.6	51.9	47.0	50.0	31.3	21.2
Max....	64	49	....	....	....	....	82	114	443	256	67	51
Min....	17	20	....	....	....	....	30	22	5.2	9.8	15	5.8
Acre-ft.	2230	2080	....	....	....	....	2060	3190	2800	3080	1920	1260

Total run-off for period=18,620 acre-feet.

Discharge of Tarryall Creek Near Lake George, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	24	15	....	....	....	....	10	52	70	171	27	104
2....	18	16	....	....	....	....	10	41	96	104	23	86
3....	18	19	....	....	....	....	10	53	129	89	24	245
4....	18	15	....	....	....	....	10	60	130	59	61	200
5....	14	10	....	....	....	....	10	55	136	54	76	180
6....	13	17	....	....	....	....	10	53	141	50	50	160
7....	11	17	....	....	....	....	10	55	237	32	58	118
8....	8.4	16	....	....	....	....	11	53	210	16	40	138
9....	7.5	11	....	....	....	....	10	51	198	18	50	127
10....	13	14	....	....	....	....	11	53	162	41	59	111
11....	14	15	....	....	....	....	12	51	115	52	105	78
12....	13	19	....	....	....	....	12	48	169	38	249	177
13....	11	17	....	....	....	....	16	45	169	29	237	353
14....	9.0	16	....	....	....	....	28	44	171	31	140	282
15....	14	20	....	....	....	....	45	45	184	105	62	130
16....	9.4	18	....	....	....	....	61	49	126	184	81	145
17....	17	20	....	....	....	....	97	51	120	60	60	106
18....	21	....	....	....	....	....	185	52	140	107	56	106
19....	21	....	....	....	....	....	301	51	143	76	40	101
20....	22	....	....	....	....	....	152	49	124	64	35	89
21....	22	....	....	....	....	....	131	48	96	34	34	85
22....	24	....	....	....	....	....	80	52	130	26	32	78
23....	26	....	....	....	....	....	69	60	198	35	32	76
24....	20	....	....	....	....	....	70	115	324	36	32	82
25....	31	....	....	....	....	....	67	46	245	29	31	81
26....	34	....	....	....	....	....	58	48	140	49	48	85
27....	28	....	....	....	....	....	60	52	154	102	133	77
28....	24	....	....	....	....	....	60	54	144	120	60	51
29....	22	....	....	....	....	....	56	92	195	140	72	64
30....	20	....	....	....	....	....	53	75	332	60	115	62
31....	17	....	....	....	....	....	....	82	....	49	105	....
Total	564.3	275	....	....	....	....	1715	1735	4928	2060	2227	3777
Mean..	18.2	16.2	....	....	....	....	57.2	56.0	164	66.5	71.8	126
Max....	34	20	....	....	....	....	301	115	332	184	249	353
Min....	7.5	10	....	....	....	....	10	41	70	16	23	51
Acre-ft.	1120	545	....	....	....	....	3400	3440	9770	4090	4420	7490

Total run-off for period=34,275 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Goose Creek Above Lake Cheesman, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	42	22	....	....	....	....	9.6	22	32	58	31	19
2....	44	....	....	....	....	....	9.6	22	29	49	29	20
3....	44	....	....	....	....	....	9.6	25	33	61	30	29
4....	38	....	....	....	....	....	9.6	24	32	42	28	36
5....	35	....	....	....	....	....	9.6	31	29	37	27	23
6....	31	....	....	....	....	....	9.6	35	27	44	27	21
7....	24	....	....	....	....	....	9.6	37	24	38	29	22
8....	31	....	....	....	....	....	9.6	46	24	39	27	21
9....	29	....	....	....	....	....	9.6	38	24	37	25	20
10....	30	....	....	....	....	....	9.6	40	24	40	24	18
11....	30	....	....	....	....	....	10	32	23	42	23	18
12....	26	....	....	....	....	....	11	27	22	57	23	17
13....	25	....	....	....	....	....	13	29	22	48	22	17
14....	23	....	....	....	....	....	18	29	22	38	21	16
15....	22	....	....	....	....	....	31	30	29	33	22	16
16....	22	....	....	....	....	....	69	30	27	31	21	16
17....	22	....	....	....	....	....	61	27	24	28	20	16
18....	21	....	....	....	....	....	28	25	20	33	25	15
19....	20	....	....	....	....	....	33	25	18	29	30	14
20....	21	....	....	....	....	....	41	24	17	23	22	14
21....	23	....	....	....	....	....	43	23	18	23	20	14
22....	22	....	....	....	....	....	64	22	19	23	19	14
23....	22	....	....	....	....	....	57	22	18	23	19	13
24....	22	....	....	....	....	....	28	21	18	23	19	13
25....	22	....	....	....	....	....	23	22	22	25	19	13
26....	21	....	....	....	....	....	39	22	94	30	20	13
27....	20	....	....	....	....	....	58	22	91	44	20	14
28....	23	....	....	....	....	....	37	22	57	76	18	14
29....	20	....	....	....	....	....	26	21	48	70	17	14
30....	22	....	....	....	....	....	26	32	51	54	22	15
31....	24	....	....	....	....	....	22	36	....	38	22	....
Total	821	....	....	....	....	....	812.0	863	938	1236	721	525
Mean	26.5	....	....	....	....	....	27.1	27.8	31.3	39.9	23.3	17.5
Max..	44	....	....	....	....	....	69	46	94	76	31	36
Min..	20	....	....	....	....	....	9.6	21	17	23	17	13
Acre-ft.	1630	....	....	....	....	....	1610	1710	1860	2450	1430	1040

Total run-off for period=11,730 acre-feet.

Discharge of Goose Creek Above Lake Cheesman, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	24	11	....	....	....	....	12	148	163	70	56	100
2....	23	11	....	....	....	....	13	104	158	56	50	98
3....	19	11	....	....	....	....	13	109	147	52	49	151
4....	17	12	....	....	....	....	12	97	137	50	65	162
5....	16	13	....	....	....	....	14	99	130	46	50	127
6....	16	12	....	....	....	....	15	93	126	44	42	116
7....	16	12	....	....	....	....	17	83	130	43	47	112
8....	16	13	....	....	....	....	16	78	126	42	44	121
9....	16	13	....	....	....	....	13	75	118	38	40	105
10....	16	13	....	....	....	....	13	78	103	37	44	96
11....	15	13	....	....	....	....	14	86	105	36	62	101
12....	15	13	....	....	....	....	15	92	105	36	64	112
13....	15	12	....	....	....	....	17	102	72	38	89	139
14....	15	....	....	....	....	....	26	118	65	62	56	101
15....	14	....	....	....	....	....	24	158	63	75	56	99
16....	15	....	....	....	....	....	29	151	75	48	48	95
17....	16	....	....	....	....	....	36	156	86	46	43	101
18....	16	....	....	....	....	....	60	164	81	73	41	94
19....	14	....	....	....	....	....	7.7	91	158	78	74	36
20....	14	....	....	....	....	....	7.7	75	152	74	54	34
21....	15	....	....	....	....	....	8.6	92	150	84	57	34
22....	15	....	....	....	....	....	8.9	97	165	73	44	32
23....	15	....	....	....	....	....	9.5	101	145	110	39	32
24....	14	....	....	....	....	....	11	112	151	82	37	32
25....	13	....	....	....	....	....	11	111	144	80	38	31
26....	12	....	....	....	....	....	9.8	140	153	86	38	65
27....	11	....	....	....	....	....	12	117	164	84	72	60
28....	11	....	....	....	....	....	11	103	179	91	82	65
29....	11	....	....	....	....	....	12	118	196	94	117	61
30....	11	....	....	....	....	....	11	112	189	88	74	63
31....	11	....	....	....	....	....	11	170	....	63	83	....
Total	467	159	....	....	....	131.2	1628	4107	3014	1681	1574	2744
Mean	15.1	12.2	....	....	....	10.1	54.3	132	100	54.2	50.3	91.5
Max..	24	13	....	....	....	12	140	196	163	117	89	162
Min..	11	11	....	....	....	7.7	12	75	63	36	31	27
Acre-ft.	926	315	....	....	....	260	3230	8150	5980	3330	3120	5440

Total run-off for period=30,750 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Bear Creek at Morrison, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	46	35	11	....	5.0	16	13	35	85	125	54	41
2.....	49	33	13	....	6.5	14	16	35	139	139	51	44
3.....	48	22	12	....	7.0	14	18	34	184	125	45	58
4.....	48	30	12	....	7.2	17	14	31	228	119	42	68
5.....	54	34	11	....	7.5	17	13	36	243	113	41	52
6.....	51	34	12	....	6.0	16	14	39	233	100	40	48
7.....	44	32	13	....	5.0	14	14	46	205	113	41	46
8.....	45	26	13	....	4.8	12	13	51	197	90	39	51
9.....	46	27	13	....	4.5	13	14	54	201	81	37	41
10.....	46	28	12	....	4.5	13	18	64	159	85	36	35
11.....	45	28	11	....	4.8	13	18	56	136	92	34	34
12.....	44	26	12	....	5.4	13	20	54	128	152	36	32
13.....	42	26	22	....	6.0	13	19	52	113	136	41	29
14.....	37	29	16	....	7.0	13	25	58	113	113	35	27
15.....	39	26	15	....	7.5	12	26	64	116	95	33	25
16.....	39	27	18	....	8.0	12	34	63	90	87	31	22
17.....	35	28	20	....	8.5	13	37	61	83	85	37	21
18.....	34	28	20	....	8.8	13	22	54	79	92	49	22
19.....	32	25	20	....	8.5	13	27	52	74	79	45	25
20.....	39	26	20	....	8.0	12	29	51	64	70	33	25
21.....	36	27	20	....	8.5	11	27	46	61	70	30	22
22.....	34	25	16	....	9.0	12	34	49	63	64	28	22
23.....	36	25	14	....	9.8	13	37	49	58	61	28	23
24.....	31	19	12	....	12	9.6	32	46	58	61	27	20
25.....	39	22	13	....	12	11	32	54	74	64	32	21
26.....	35	22	15	*3.9	14	11	39	58	263	59	30	21
27.....	33	22	12	....	13	10	45	51	201	61	28	25
28.....	36	20	10	....	13	11	44	46	142	83	26	26
29.....	33	16	11	....	....	12	37	51	130	74	36	28
30.....	36	12	11	....	....	12	32	74	122	61	70	34
31.....	36	....	10	....	....	12	....	76	....	61	70	....
Total	1248	780	440	217	221.8	397.6	763	1590	4042	2810	1205	988
Mean.	40.3	26	14.2	†7.0	7.92	12.8	25.4	51.3	135	90.6	38.9	32.9
Max..	54	35	22	....	14	17	45	76	263	152	70	68
Min..	31	12	10	....	4.5	9.6	13	31	58	59	26	20
Acre-ft.	2480	1550	873	430	440	789	1510	3150	8020	5570	2390	1960

Total run-off for water year 1936-37=29,160 acre-feet.

*Discharge measurement.

†Estimated.

Discharge of Bear Creek at Morrison, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	33	18	13	11	28	16	16	185	295	108	71	157
2.....	28	19	14	11	19	16	15	160	290	101	68	833
3.....	23	19	16	11	15	17	16	177	280	99	68	610
4.....	21	19	14	11	13	19	18	200	300	97	63	575
5.....	20	18	16	10	12	16	20	203	285	90	57	560
6.....	19	17	12	10	12	14	29	177	266	92	56	540
7.....	21	20	11	11	17	16	23	177	233	88	56	610
8.....	23	19	10	11	11	14	22	170	242	80	54	550
9.....	30	19	12	11	12	16	23	177	216	75	50	520
10.....	23	20	14	11	13	13	27	188	200	78	63	630
11.....	27	19	18	11	14	12	25	207	196	78	69	740
12.....	24	17	20	11	14	14	25	225	185	75	75	580
13.....	22	15	23	14	14	15	26	220	177	75	71	325
14.....	21	14	24	12	16	16	47	247	170	151	60	377
15.....	23	15	23	13	15	13	68	261	154	148	56	325
16.....	24	14	19	14	16	12	78	256	157	106	56	319
17.....	25	13	19	14	16	13	90	233	154	97	51	295
18.....	25	14	18	14	17	16	108	229	144	106	51	245
19.....	19	14	17	15	16	16	160	207	127	97	46	211
20.....	23	17	17	20	15	16	132	196	130	90	41	182
21.....	23	19	16	24	15	17	130	251	141	88	41	164
22.....	24	17	16	16	15	19	127	355	154	84	40	143
23.....	24	13	14	14	14	14	132	388	188	80	39	129
24.....	24	13	13	18	14	18	141	394	151	77	39	174
25.....	23	17	12	17	14	20	144	355	141	78	43	225
26.....	22	14	12	16	14	18	170	316	121	88	92	230
27.....	21	15	12	15	14	15	220	311	118	90	82	235
28.....	20	14	11	14	14	18	185	322	118	110	106	235
29.....	19	20	10	18	....	16	177	350	121	88	92	207
30.....	19	24	11	24	....	16	181	333	132	80	108	194
31.....	18	....	11	22	....	12	....	300	....	77	138	....
Total	711	501	468	444	419	483	2575	7770	5586	2871	2002	11120
Mean.	22.9	16.7	15.1	14.3	15.0	15.6	85.8	251	186	92.6	64.6	371
Max..	33	24	24	24	28	20	220	394	300	151	138	833
Min..	18	12	10	10	11	12	15	160	118	75	39	129
Acre-ft.	1410	994	928	881	831	958	5110	15410	11080	5690	3970	22060

Total run-off for water year 1937-38=69,320 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Bear Creek at Mouth at Sheridan Junction, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	43	32	11	....	9.5	10	9.0	21	17	17	18	41
2....	57	29	11	....	9.5	10	9.5	25	34	23	20	28
3....	59	24	10	....	9.5	10	10	23	90	28	16	31
4....	57	24	10	....	9.5	10	10	22	47	19	12	35
5....	56	22	9.5	....	9.5	12	11	18	56	17	16	24
6....	57	21	17	....	9.5	12	12	17	39	16	13	19
7....	58	22	10	....	9.5	10	10	17	53	14	12	20
8....	57	20	11	....	9.5	9.5	11	8.0	78	15	9.5	23
9....	56	20	10	....	9.5	9.5	10	6.8	53	13	10	19
10....	54	18	9.0	....	9.5	9.0	9.5	7.7	70	12	8.0	16
11....	48	18	10	....	9.5	9.5	8.0	6.2	69	14	7.5	20
12....	46	17	15	....	9.8	9.0	9.0	4.7	56	37	8.0	23
13....	44	17	17	....	12	9.5	10	4.4	39	62	37	22
14....	52	17	18	....	10	8.0	10	4.1	38	30	14	21
15....	47	15	19	....	10	9.5	12	4.1	49	14	9	23
16....	49	16	20	....	11	8.0	10	4.4	36	12	7	22
17....	50	16	20	....	10	11	10	4.4	32	8.5	7	22
18....	50	17	11	....	11	7.1	10	6.5	31	17	6.7	21
19....	50	15	11	....	12	7.1	8.5	5.3	30	22	7.5	21
20....	49	14	12	....	15	6.8	5.3	5.6	30	14	7.0	20
21....	39	13	11	....	12	6.2	6.2	6.5	28	13	6.7	16
22....	44	12	12	....	12	6.5	7.1	4.1	27	12	6.4	16
23....	44	12	11	....	11	6.2	12	4.7	26	12	6.7	16
24....	45	12	12	....	12	6.2	12	5.3	27	14	9.5	15
25....	43	12	12	....	12	6.2	10	5.9	40	16	14	16
26....	38	12	11	*9.5	15	6.5	8.5	5.3	124	16	14	23
27....	36	12	11	....	13	6.8	19	4.7	114	14	15	22
28....	39	12	12	....	10	7.1	27	5.6	52	15	16	22
29....	35	12	10	....	....	7.1	22	6.8	30	14	19	21
30....	33	11	10	....	....	7.7	20	32	15	16	56	19
31....	33	....	10	....	....	7.7	....	15	....	16	108	....
Total	1468	514	383.5	279	302.3	261.7	338.6	311.1	1430	562.5	516.5	657
Mean.	47.4	17.1	12.4	†9.0	10.8	8.44	11.3	10.0	47.7	18.1	16.7	21.9
Max..	59	32	20	....	15	12	27	32	124	62	108	41
Min..	33	11	9.0	....	9.5	6.2	5.3	4.1	15	8.5	6.4	15
Acre-ft.	2910	1020	761	553	600	519	672	617	2840	1120	1020	1300

Total run-off for water year 1936-37=13,930 acre-feet.

*Discharge measurement.

†Estimated.

Discharge of Bear Creek at Mouth at Sheridan Junction, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	27	19	13	12	12	8.2	9.0	238	290	62	27	55
2....	25	20	12	12	9.6	8.1	9.0	219	274	37	26	251
3....	24	21	12	11	9.5	8.2	8.9	251	251	30	24	539
4....	21	21	12	11	9.1	8.2	8.8	324	228	31	22	435
5....	22	21	12	11	9.0	8.2	8.7	352	213	30	24	422
6....	25	20	12	11	9.2	8.0	8.8	348	183	22	24	385
7....	25	22	12	10	8.9	7.8	9.3	348	125	23	23	372
8....	25	22	13	10	8.8	8.7	9.2	348	113	23	19	389
9....	23	21	14	9.9	8.7	8.8	8.8	352	78	22	18	312
10....	25	22	14	11	8.7	8.5	8.5	390	54	26	21	270
11....	24	22	15	9.8	8.6	8.2	8.4	383	53	32	20	324
12....	24	20	14	11	8.7	7.7	8.2	383	51	24	23	504
13....	26	20	14	11	8.5	7.4	7.9	372	47	24	22	482
14....	25	21	15	10	8.4	8.2	8.9	355	46	45	24	372
15....	24	21	15	9.5	8.2	8.8	48	345	37	50	21	340
16....	24	20	14	9.4	8.2	8.5	45	362	30	35	21	293
17....	25	21	15	9.1	8.5	8.7	55	331	25	36	24	259
18....	25	20	14	9.1	9.0	8.7	111	304	22	37	28	219
19....	24	18	15	9.1	9.8	8.8	143	301	25	34	25	199
20....	26	16	14	9.0	9.2	8.6	136	261	48	28	24	176
21....	26	16	18	9.2	8.6	8.5	125	352	67	32	22	155
22....	26	16	14	9.2	8.7	9.2	121	507	54	31	22	144
23....	25	16	16	9.0	8.6	8.8	67	476	167	31	21	131
24....	25	14	14	9.3	8.4	8.9	65	450	91	31	22	118
25....	22	14	14	15	8.4	8.6	65	407	71	30	24	108
26....	21	13	15	11	8.2	9.3	96	366	89	31	53	94
27....	20	14	13	9.7	8.1	9.3	170	366	82	42	37	92
28....	21	13	13	9.5	8.1	9.3	134	341	87	41	34	87
29....	20	13	13	10	....	9.2	139	358	81	54	45	80
30....	18	12	12	12	....	9.3	162	376	87	30	48	68
31....	20	....	12	12	....	9.2	....	318	....	27	52	....
Total	733	549	425	321.8	247.7	265.9	1804.4	10884	3069	1031	840	7675
Mean.	23.6	18.3	13.7	10.4	8.85	8.58	60.1	351	102	33.3	27.1	256
Max..	27	22	18	15	12	9.3	170	507	290	62	53	539
Min..	18	12	12	9.0	8.1	7.4	7.9	219	22	22	18	55
Acre-ft.	1450	1090	843	638	491	527	3580	21590	6090	2040	1670	15220

Total run-off for water year 1937-38=55,230 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Clear Creek Near Golden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	177	117	.....	.....	.....	50	59	122	578	838	268	140
2....	170	109	.....	.....	.....	52	59	109	755	718	259	184
3....	170	69	.....	.....	.....	52	59	109	780	644	264	188
4....	163	89	.....	.....	.....	54	51	114	852	578	254	209
5....	156	114	.....	.....	.....	54	46	131	742	567	244	196
6....	170	112	.....	.....	.....	56	48	156	633	556	235	181
7....	149	106	.....	.....	.....	58	55	184	611	644	226	177
8....	140	82	.....	.....	.....	60	48	201	622	622	201	170
9....	143	87	.....	.....	.....	65	48	222	622	578	192	156
10....	152	87	.....	.....	.....	61	53	283	556	536	188	146
11....	152	84	.....	.....	.....	61	65	288	556	520	188	146
12....	152	87	.....	.....	.....	59	59	288	633	622	201	140
13....	152	84	.....	.....	.....	53	65	342	622	528	222	131
14....	152	84	.....	.....	.....	53	73	411	655	494	201	125
15....	156	80	.....	.....	.....	59	87	486	680	460	188	125
16....	163	80	.....	.....	.....	53	96	622	692	411	181	119
17....	166	80	.....	.....	.....	55	106	644	809	384	209	119
18....	152	80	.....	.....	.....	51	91	589	824	372	254	117
19....	152	78	.....	.....	.....	53	82	655	780	354	201	112
20....	163	*78	.....	.....	.....	39	69	567	680	314	177	114
21....	152	78	.....	.....	.....	49	80	502	755	294	166	114
22....	140	79	*72	.....	.....	51	104	468	824	278	149	114
23....	137	80	.....	.....	.....	57	125	556	852	294	143	140
24....	134	70	.....	.....	.....	28	122	468	780	283	146	131
25....	140	73	.....	.....	*47	48	112	502	838	278	156	112
26....	134	90	.....	*34	.....	82	114	486	1320	268	152	109
27....	122	85	.....	.....	.....	61	117	477	896	314	134	104
28....	128	83	.....	.....	.....	55	125	494	768	336	140	101
29....	112	82	.....	.....	.....	51	128	520	705	348	146	101
30....	112	84	.....	.....	.....	46	125	578	768	309	159	101
31....	122	.....	.....	.....	.....	59	.....	589	.....	336	143	.....
Total	4583	2591	2170	1240	1400	1685	2471	12163	22188	14078	5987	4122
Mean.	148	86.4	†70	†40	†50	54.4	82.4	392	740	454	193	137
Max.	177	117	.....	.....	.....	82	128	655	1320	838	268	209
Min.	112	69	.....	.....	.....	28	46	109	556	268	134	101
Acre-ft.	9090	5140	4300	2460	2780	3340	4900	24120	44010	27920	11880	8180

Total run-off for water year 1936-37=148,100 acre-feet.

*Discharge measurement.

†Estimated.

Discharge of Clear Creek Near Golden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	131	76	72	46	44	51	56	367	1390	1400	294	374
2....	118	74	84	46	44	49	47	394	1430	1200	285	680
3....	108	74	106	45	44	48	47	428	1660	1100	332	1190
4....	106	76	88	45	45	49	52	461	1890	1060	309	900
5....	101	61	80	45	45	50	58	444	1870	1060	343	740
6....	90	70	80	44	46	48	70	414	1940	873	276	596
7....	88	95	90	45	48	49	52	387	1770	775	272	501
8....	90	82	108	45	48	49	52	360	1800	708	276	439
9....	95	82	104	47	50	49	54	349	1680	672	272	386
10....	88	90	104	50	50	49	59	337	1800	635	303	361
11....	88	82	111	53	50	48	54	337	1540	600	303	342
12....	88	76	118	54	51	48	63	343	1650	580	290	361
13....	95	58	93	*61	52	50	67	337	1720	580	343	393
14....	86	72	90	61	49	54	97	354	1510	659	309	412
15....	90	74	88	58	46	53	142	444	1350	635	285	412
16....	90	70	81	56	45	50	140	510	1370	560	262	419
17....	86	74	76	54	46	49	148	590	1340	550	258	406
18....	88	78	70	51	47	49	159	672	1390	540	246	367
19....	82	80	64	49	48	52	226	659	1130	494	226	342
20....	82	121	60	47	49	56	211	600	1130	485	208	324
21....	88	126	58	46	49	59	204	622	1510	461	190	324
22....	82	81	50	46	50	54	204	659	1710	436	186	324
23....	78	74	*44	45	50	31	222	610	1760	380	204	312
24....	76	80	45	44	50	54	238	610	1620	360	200	294
25....	76	76	46	42	52	47	276	647	1560	354	200	267
26....	76	76	46	43	52	46	303	672	1430	349	290	257
27....	76	61	47	45	53	44	380	733	1370	360	272	257
28....	78	65	47	46	52	56	349	889	1470	428	272	252
29....	76	84	47	42	.....	41	320	1300	1420	387	298	252
30....	76	72	47	43	.....	44	320	1480	1600	343	326	241
31....	76	.....	47	43	.....	33	.....	1300	.....	303	421	.....
Total	2748	2363	2291	1487	1355	1509	4670	18309	46810	19327	8551	12725
Mean.	88.6	78.8	73.9	48.0	48.4	48.7	156	591	1560	623	276	424
Max.	131	126	118	61	53	59	380	1480	1940	1400	421	1190
Min.	76	58	44	42	41	31	47	337	1130	303	186	241
Acre-ft.	5450	4690	4540	2950	2690	2990	9260	36320	92850	38330	16960	25240

Total run-off for water year 1937-38=242,300 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Clear Creek at Mouth Near Derby, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	197	86	29	6	10	35	11	8.0	222	532	26	8.4
2....	139	80	27	7	12	34	8.4	9.5	290	453	6.5	13
3....	118	72	21	9	14	32	7.8	14	543	306	6.0	11
4....	96	58	27	9	16	28	9.6	8.0	618	252	5.0	15
5....	64	116	18	8	19	26	8.4	11	601	220	4.5	12
6....	147	100	24	6	17	25	6.6	47	318	196	5.5	10
7....	112	94	19	4	15	25	9.0	106	126	224	5.5	9.1
8....	40	27	17	5	13	24	14	100	200	208	5.0	7.7
9....	26	42	15	7	16	24	14	89	190	216	4.5	7.7
10....	26	34	13	9	17	24	11	200	162	256	4.5	6.5
11....	26	34	11	11	*18	24	8.4	168	124	277	5.5	5.5
12....	57	34	*10	10	18	24	6.6	154	89	439	6.0	7.7
13....	80	36	10	11	18	25	5.7	126	102	344	6.0	9.1
14....	9.2	38	10	*12	18	40	5.1	236	119	188	9.8	4.5
15....	8.5	32	10	12	18	34	4.5	270	277	147	4.5	4.5
16....	12	39	10	12	18	31	4.2	231	204	105	6.0	4.5
17....	9.2	34	10	11	18	28	18	96	216	98	10	4.5
18....	11	38	11	9	17	25	26	22	200	168	29	4.5
19....	15	39	10	8	15	26	12	53	184	159	6.5	4.5
20....	82	39	8	6	15	26	12	16	156	100	5.0	4.5
21....	120	34	8	5	16	24	12	22	229	62	4.0	4.5
22....	90	36	8	6	18	33	8.0	47	300	25	3.0	4.5
23....	72	40	8	6	17	39	44	100	484	30	3.0	4.5
24....	62	27	8	7	18	38	89	82	425	80	2.0	4.5
25....	57	23	8	8	20	41	20	134	652	86	2.5	5.0
26....	37	22	8	10	25	169	6.5	106	1730	79	1.1	5.0
27....	18	20	8	9	28	40	8.0	34	1070	79	1.1	5.0
28....	24	27	8	8	30	11	20	44	700	134	1.9	5.0
29....	21	22	8	8	....	9.6	17	200	524	168	8.4	5.0
30....	15	22	7	9	....	8.4	11	265	492	84	8.4	5.0
31....	30	....	7	9	....	8.4	....	75	70	15	....	....
Total	1820.9	1345	396	257	494	981.4	437.8	3073.5	11547	5785	211.7	202.2
Mean.	58.7	44.8	12.8	8.29	17.6	31.7	14.6	99.1	385	187	6.83	6.74
Max..	197	116	29	....	....	169	89	270	1730	532	29	15
Min..	8.5	20	....	....	....	8.4	4.2	8	89	25	1.1	4.5
Acre-ft.	3610	2670	785	510	980	1950	868	6100	22900	11470	420	401

Total run-off for water year 1936-37=52,660 acre-feet.

*Discharge measurement.

Discharge of Clear Creek at Mouth Near Derby, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.0	8.8	18	11	23	18	12	15	970	584	60	59
2....	5.0	9.2	16	12	28	14	12	15	938	450	18	42
3....	5.0	7.6	18	18	23	18	10	84	962	356	21	840
4....	5.0	8.4	18	22	23	20	18	62	858	328	19	270
5....	5.0	7.6	17	10	20	15	16	8.7	978	314	16	209
6....	4.0	6.8	16	6.8	18	11	36	11	1010	314	15	162
7....	3.0	7.2	17	8.8	22	11	28	77	1170	307	16	148
8....	4.0	5.6	5.2	12	19	10	38	7.0	1000	248	16	106
9....	5.0	4.4	15	13	19	15	45	3.0	1000	175	12	88
10....	4.0	3.6	16	14	17	11	43	3.0	800	170	25	38
11....	4.0	3.2	26	13	15	9.6	37	12	1000	186	70	60
12....	4.0	12	36	12	18	8.8	43	37	750	175	16	187
13....	4.0	18	28	18	25	12	89	62	928	180	14	130
14....	5.0	14	21	15	42	17	142	68	916	242	16	75
15....	4.0	17	18	23	51	26	120	123	628	287	11	110
16....	4.5	18	17	21	26	11	80	209	705	274	12	148
17....	3.5	14	14	18	35	19	38	392	716	280	16	176
18....	3.5	15	12	16	32	18	28	404	683	254	16	146
19....	4.5	18	10	14	22	12	20	284	628	224	14	130
20....	4.5	57	5.2	14	15	7.2	19	290	540	160	11	117
21....	4.5	95	9.6	14	18	12	14	746	952	118	12	119
22....	4.5	104	10	17	17	14	14	842	1080	122	12	117
23....	5.0	95	4.8	16	16	10	9.2	715	1440	115	12	110
24....	4.5	95	4.8	9.6	16	7.2	31	890	1340	100	12	81
25....	4.8	92	6.4	9.6	17	9.6	56	1070	1200	95	11	67
26....	5.6	86	6.0	14	17	12	68	1070	976	92	57	53
27....	6.4	84	8.4	15	21	4.0	317	1170	832	90	29	37
28....	5.6	79	9.6	15	18	3.6	12	1360	904	85	35	37
29....	7.6	79	10	5.2	....	1.9	12	1820	562	80	49	36
30....	8.4	39	16	10	....	8.0	12	2220	856	80	59	18
31....	8.4	....	18	21	....	8.0	....	1270	....	80	75	....
Total	151.8	1103.4	447.0	438.0	633	373.9	1419.2	15339.7	27322	6565	777	3916
Mean.	4.90	36.8	14.4	14.1	22.6	12.1	47.3	495	911	212	25.1	131
Max..	8.4	104	36	23	51	26	317	2220	1440	584	75	840
Min..	3.0	3.2	4.8	5.2	15	1.9	9.2	3.0	540	80	11	18
Acre-ft.	301	2190	887	869	1260	742	2810	30430	54190	13020	1540	7770

Total run-off for water year 1937-38=116,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Fall River Near Idaho Springs, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	16	13	.....	.....	.....	.....	.....	.....	45	53	24	12
2....	15	11	.....	.....	.....	.....	.....	.....	46	50	22	14
3....	14	.....	.....	.....	.....	.....	.....	.....	44	46	19	23
4....	14	.....	.....	.....	.....	.....	.....	.....	42	42	19	24
5....	14	.....	.....	.....	.....	.....	.....	.....	37	38	18	19
6....	14	.....	.....	.....	.....	.....	.....	.....	33	37	17	16
7....	14	.....	.....	.....	.....	.....	.....	.....	31	35	16	15
8....	14	.....	.....	.....	.....	.....	.....	.....	35	36	15	14
9....	14	.....	.....	.....	.....	.....	.....	.....	35	36	14	13
10....	14	.....	.....	.....	.....	.....	.....	.....	36	35	13	12
11....	13	.....	.....	.....	.....	.....	.....	.....	41	34	24	12
12....	12	.....	.....	.....	.....	.....	.....	.....	42	33	38	12
13....	12	.....	.....	*3.6	.....	.....	.....	.....	42	30	38	11
14....	12	.....	.....	.....	.....	.....	.....	.....	42	33	37	11
15....	12	.....	.....	.....	.....	*4.2	7.2	.....	45	30	34	11
16....	13	.....	.....	.....	.....	.....	14	.....	45	29	32	12
17....	12	.....	.....	.....	.....	.....	11	.....	47	28	42	11
18....	13	.....	.....	.....	.....	.....	9.8	.....	47	27	28	10
19....	13	.....	.....	.....	.....	.....	11	.....	50	24	27	9.4
20....	14	.....	.....	.....	.....	.....	8.9	.....	50	21	37	9.4
21....	16	.....	.....	.....	.....	.....	9.8	.....	54	21	35	9.0
22....	15	.....	.....	.....	.....	.....	12	.....	55	19	28	9.4
23....	14	.....	.....	.....	.....	.....	10	.....	55	20	22	9.8
24....	14	.....	.....	.....	*1.5	.....	7.7	.....	51	19	18	9.8
25....	15	.....	.....	.....	.....	.....	8.9	.....	78	17	16	9.8
26....	14	.....	.....	.....	.....	.....	.....	.....	99	18	15	9.0
27....	14	.....	.....	.....	.....	.....	.....	.....	70	32	14	8.2
28....	14	.....	.....	.....	.....	.....	Apr. 15	.....	54	30	13	8.2
29....	14	.....	.....	.....	.....	.....	to 25	.....	51	27	14	7.8
30....	14	.....	.....	.....	.....	.....	.....	.....	54	25	13	8.2
31....	16	.....	.....	.....	.....	.....	.....	.....	.....	28	11	.....
Total	429	.....	.....	.....	.....	.....	110.3	.....	1456	953	713	360.0
Mean.	13.8	.....	.....	.....	.....	.....	10.0	.....	48.5	30.7	23.0	12.0
Max..	16	.....	.....	.....	.....	.....	14	.....	99	53	42	24
Min..	12	.....	.....	.....	.....	.....	7.2	.....	31	17	11	7.8
Acre-ft.	851	.....	.....	.....	.....	.....	219	.....	2890	1890	1410	714

Total run-off for period=7,974 acre-feet.

*Discharge measurement.

Discharge of Fall River Near Idaho Springs, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	13	.....	.....	.....	4.5	8.0	31	143	125	36	28
2....	13	12	.....	.....	.....	4.5	8.6	33	143	106	38	48
3....	13	12	.....	.....	.....	4.5	8.6	38	151	100	39	82
4....	11	11	.....	*6.5	.....	4.5	8.0	38	145	95	35	54
5....	9.8	11	.....	.....	.....	4.5	9.2	37	127	84	32	37
6....	9.8	11	.....	.....	.....	4.5	11	33	147	74	32	34
7....	9.4	10	.....	.....	*2.6	4.5	10	33	115	58	31	34
8....	11	9.4	.....	.....	.....	4.5	11	30	112	51	29	31
9....	11	11	.....	.....	.....	4.5	9.8	28	108	46	28	28
10....	11	11	.....	.....	.....	4.5	7.6	26	115	42	39	27
11....	12	11	.....	.....	.....	4.5	5.8	26	115	38	36	29
12....	11	11	.....	.....	.....	4.5	3.2	26	151	38	48	34
13....	11	12	.....	.....	.....	4.5	4.0	29	143	38	62	28
14....	9.8	11	.....	.....	.....	4.5	4.0	35	102	46	54	27
15....	11	9.8	.....	.....	.....	4.5	4.0	37	106	46	51	25
16....	12	11	.....	.....	.....	5.0	10	41	106	46	45	25
17....	11	12	.....	.....	.....	5.0	10	50	108	48	45	25
18....	11	11	.....	.....	.....	5.3	12	57	95	44	40	21
19....	9.4	11	.....	.....	.....	5.4	19	58	82	40	36	19
20....	11	11	.....	.....	.....	5.4	14	54	89	41	37	17
21....	13	11	.....	.....	.....	5.8	9.8	55	121	37	34	17
22....	13	11	.....	.....	.....	5.8	11	61	139	36	38	17
23....	14	11	.....	.....	.....	5.8	12	55	121	35	41	18
24....	14	10	.....	.....	.....	5.3	15	51	112	35	37	19
25....	15	10	.....	.....	.....	7.6	22	54	112	36	38	16
26....	13	14	.....	.....	.....	9.2	20	61	106	46	41	19
27....	12	13	.....	.....	.....	8.6	19	76	108	42	38	21
28....	12	10	.....	.....	.....	8.0	16	98	115	40	34	20
29....	12	10	.....	.....	.....	8.0	21	163	165	38	31	20
30....	12	10	.....	.....	.....	8.6	28	157	165	38	33	19
31....	12	.....	.....	.....	.....	8.6	.....	145	.....	37	35	.....
Total	364.2	332.2	248	186	126	174.9	351.6	1716	3667	1626	1193	849
Mean.	11.7	11.1	8.0	6.0	4.5	5.64	11.7	55.4	122	52.5	38.5	28.3
Max..	15	14	.....	.....	.....	9.2	28	163	165	125	62	82
Min..	9.4	9.4	.....	.....	.....	4.5	3.2	26	82	35	28	16
Acre-ft.	722	659	492	369	250	347	697	3400	7270	3230	2370	1680

Total run-off for water year 1937-38=21,490 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Boulder Creek Near Eldorado Springs, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	53	41	12	7	2	7	12	62	274	192	56	18
2....	53	44	13	5	3	8	16	59	306	155	46	22
3....	50	35	13	5	3	8	21	54	290	145	39	22
4....	42	30	7	5	3	7	16	58	336	132	39	33
5....	42	48	6	4	5	8	14	70	286	116	32	29
6....	51	46	5	4	6	9	16	79	274	116	31	25
7....	48	39	5	3	6	10	14	112	249	130	27	27
8....	49	31	5	3	8	10	14	114	234	114	24	23
9....	45	32	8	3	7	10	14	128	253	96	24	19
10....	44	39	12	3	9	10	30	172	257	93	24	19
11....	40	31	13	3	10	11	45	162	350	88	22	22
12....	37	31	13	4	9	11	38	152	480	105	21	18
13....	36	31	12	5	9	10	43	168	460	85	21	16
14....	16	28	*14	4	9	10	50	180	373	86	31	16
15....	37	28	14	5	9	9	62	222	340	77	24	16
16....	35	28	15	6	9	10	73	249	327	70	22	16
17....	34	24	15	7	9	11	75	234	404	72	35	16
18....	32	23	14	*6.6	9	11	51	249	429	72	46	16
19....	31	16	13	7	8	12	53	378	359	61	35	14
20....	36	26	*12	6	7	12	54	261	323	54	27	13
21....	33	22	12	5	7	14	56	208	306	55	27	13
22....	35	17	11	4	6.7	14	72	189	278	52	23	13
23....	36	15	11	4	7	18	67	208	226	55	21	13
24....	35	14	12	3	7	12	52	219	189	59	19	14
25....	46	14	8	3	7	18	51	340	266	56	24	14
26....	43	16	9	4	7	16	64	278	586	53	21	13
27....	40	16	9	5	7	12	72	319	265	61	20	13
28....	46	14	6	4	7	12	70	286	192	63	21	12
29....	42	12	7	3	....	12	70	331	180	64	22	13
30....	44	12	6	3	....	16	63	354	170	56	26	12
31....	44	....	6	2	....	12	....	331	....	85	19	....
Total	1255	803	318	135.6	195.7	350	1348	6226	9262	2718	869	530
Mean	40.5	26.8	10.3	4.37	6.99	11.3	44.9	201	309	87.7	28.0	17.7
Max.	53	48	15	7	10	18	75	378	586	192	56	33
Min.	16	12	5	2	2	7	12	54	170	52	19	12
Acre-ft.	2490	1590	631	269	388	694	2670	12350	18370	5390	1720	1050

Total run-off for water year 1936-37==47,610 acre-feet.

*Discharge measurement.

Discharge of South Boulder Creek Near Eldorado Springs, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	26	15	12	8	9	....	21	237	491	532	58	47
2....	26	14	14	7	10	....	22	240	496	482	65	215
3....	18	14	16	7	10	....	19	244	532	438	63	595
4....	14	14	15	8	9	....	23	258	594	416	52	420
5....	14	11	13	8	8	....	25	298	491	223	47	300
6....	13	14	11	9	7	....	30	258	522	187	45	225
7....	14	15	9	9	7	....	18	237	504	181	43	115
8....	13	10	8	9	*8.2	....	31	220	599	154	46	115
9....	16	13	10	9	9	....	21	216	504	181	41	131
10....	14	15	12	9	9	....	26	226	550	149	45	131
11....	14	9.6	14	7	8	....	24	237	545	123	43	151
12....	14	10	19	8	8	....	30	251	608	123	40	127
13....	18	5	21	*9.8	8	....	34	283	626	120	42	114
14....	16	3.4	20	12	8	....	52	340	581	169	34	98
15....	16	14	15	16	6	....	82	378	532	138	31	116
16....	18	10	*16	16	5	....	95	366	536	116	33	91
17....	17	12	15	16	7	....	111	362	545	125	29	83
18....	19	19	14	15	8	....	140	370	536	123	28	78
19....	16	26	12	15	8	....	213	378	468	105	22	76
20....	15	22	10	15	8	....	154	362	509	102	20	72
21....	21	27	9	14	8	....	135	347	509	91	19	63
22....	18	20	8	14	7	....	138	416	532	85	19	66
23....	18	20	8	10	7	....	149	370	532	80	19	56
24....	18	21	10	7	8	....	160	395	518	82	19	74
25....	16	19	10	7	9	....	160	395	446	79	23	62
26....	16	14	11	9	9	....	203	429	460	79	52	36
27....	15	11	12	10	9	....	210	468	404	79	32	14
28....	16	11	12	10	8	....	223	514	370	82	39	12
29....	14	12	12	8	....	....	237	558	387	73	31	24
30....	15	16	13	8	....	....	230	590	514	66	38	50
31....	16	....	11	8	....	....	....	496	....	63	45	....
Total	514	437.0	392	317.8	225.2	301	3016	10739	15487	5046	1163	3757
Mean	16.6	14.6	12.6	10.3	8.04	9.71	101	346	516	163	37.5	125
Max.	27	21	16	10	....	....	237	590	626	532	65	595
Min.	13	8	8	7	7	....	18	216	370	63	19	12
Acre-ft.	1020	867	778	630	447	597	5980	21300	30720	10010	2310	7450

Total run-off for water year 1937-38==82,110 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Middle Boulder Creek at Nederland, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	25	18	7.7	.....	.....	.....	*18	30	159	172	53	40
2....	22	16	9.6	.....	.....	.....	*18	28	199	153	44	42
3....	22	8.5	10	.....	.....	.....	*18	27	195	138	40	41
4....	21	16	7.9	.....	.....	.....	*18	29	183	132	36	41
5....	21	18	7.0	.....	.....	.....	*18	46	150	127	34	36
6....	21	16	6.6	.....	.....	.....	*18	65	115	123	32	37
7....	19	14	6.8	.....	.....	.....	*18	87	102	155	31	35
8....	19	16	7.1	.....	.....	.....	*18	102	100	127	29	33
9....	19	15	6.8	.....	.....	.....	*18	127	100	120	27	31
10....	19	14	7.3	.....	.....	.....	*18	144	103	112	26	30
11....	19	14	7.1	.....	.....	.....	*18	134	106	103	24	28
12....	19	14	7.0	.....	.....	.....	*18	121	175	110	24	23
13....	18	13	6.8	.....	.....	.....	*18	128	166	118	27	20
14....	16	13	7.0	.....	.....	.....	*18	159	148	117	23	19
15....	16	13	7.3	.....	.....	.....	*18	214	163	104	22	19
16....	16	13	7.5	.....	.....	.....	*18	214	161	92	54	18
17....	16	13	7.3	.....	.....	.....	26	199	185	93	153	18
18....	14	12	7.1	.....	.....	.....	28	213	195	91	92	17
19....	14	11	7.0	.....	.....	.....	26	211	189	77	54	16
20....	16	12	7.0	.....	.....	.....	27	181	175	69	43	16
21....	18	12	6.6	.....	.....	.....	29	148	202	63	38	15
22....	19	11	6.6	.....	.....	.....	40	153	226	60	34	15
23....	17	9.2	6.6	.....	.....	.....	39	175	211	57	32	17
24....	15	9.4	6.6	.....	.....	.....	28	172	183	55	31	18
25....	16	9.8	6.4	.....	.....	.....	26	187	240	55	32	17
26....	17	9.0	6.4	.....	.....	.....	31	144	321	56	29	16
27....	13	9.2	6.0	.....	.....	.....	44	147	211	61	27	15
28....	14	8.3	5.8	.....	.....	.....	44	179	185	55	26	14
29....	14	8.1	5.8	.....	.....	.....	37	193	166	51	32	14
30....	17	7.5	5.7	.....	.....	.....	31	189	168	50	35	14
31....	18	.....	5.3	.....	.....	.....	.....	150	.....	51	29	.....
Total	550	373.0	215.7	*62.5	*95.6	*128.8	*744	4296	5182	2947	1213	715
Mean.	17.7	12.4	6.96	2.02	3.41	4.15	24.8	139	173	95.1	39.1	23.8
Max..	25	18	10	.....	.....	.....	.....	214	321	172	153	42
Min..	13	7.5	5.3	.....	.....	.....	.....	27	100	50	22	14
Acre-ft.	1090	740	428	124	190	255	1480	8520	10280	5850	2410	1420

Total run-off for water year 1936-37=32,790 acre-feet.

*Estimated.

Discharge of Middle Boulder Creek at Nederland, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	19	20	12	7.9	6.0	5.5	8.7	113	288	290	80	44
2....	20	18	12	7.7	5.8	6.0	6.4	94	332	257	80	62
3....	18	17	12	7.5	5.8	6.4	8.1	92	378	240	78	153
4....	16	18	11	7.0	5.7	5.8	8.5	72	390	240	75	94
5....	14	14	11	7.7	6.0	5.8	9.6	63	356	216	70	80
6....	14	16	11	7.5	6.4	6.2	10	55	332	197	68	67
7....	14	18	10	10	5.7	*7.0	11	51	306	181	63	61
8....	16	15	11	6.8	5.8	*7.0	10	47	283	179	66	52
9....	16	20	11	7.0	5.8	5.8	10	46	290	174	67	47
10....	16	18	11	7.1	6.2	6.0	11	48	348	161	70	44
11....	16	16	13	9.0	6.2	6.8	11	50	297	147	71	46
12....	16	15	13	10	6.4	8.1	13	55	295	142	71	67
13....	15	16	12	7.0	6.2	6.8	16	71	337	132	73	64
14....	14	16	12	7.0	7.5	6.6	20	105	285	177	72	55
15....	15	14	11	7.1	5.7	5.5	18	118	240	168	67	49
16....	17	14	11	8.1	8.7	7.3	21	135	259	153	59	46
17....	17	14	10	8.1	5.7	8.3	24	153	280	148	51	43
18....	18	13	9.8	7.9	7.1	7.7	30	156	253	145	44	40
19....	17	15	10	7.9	6.4	9.0	41	155	232	127	37	37
20....	20	16	10	7.9	5.3	8.3	34	148	268	125	32	33
21....	21	16	9.8	7.7	5.8	8.3	32	134	334	113	28	31
22....	19	16	9.4	7.7	5.7	7.5	40	134	398	103	26	29
23....	19	16	9.2	7.7	5.3	8.3	51	117	341	105	26	29
24....	22	14	9.0	8.3	5.2	9.4	57	117	304	104	27	28
25....	22	13	9.2	7.0	5.2	7.9	68	128	317	101	53	27
26....	20	14	8.3	7.3	5.2	8.3	79	161	295	98	63	25
27....	20	11	7.1	6.2	5.3	11	70	211	292	93	30	24
28....	21	14	8.5	6.0	5.3	9.6	62	257	288	87	37	23
29....	20	13	8.5	5.8	.....	8.7	71	315	310	89	32	22
30....	21	13	8.3	6.8	.....	10	*74	317	392	87	35	22
31....	21	.....	8.3	6.0	.....	11	.....	278	.....	83	35	.....
Total	554	463	319.4	232.7	167.4	235.9	925.3	3996	9320	4662	1686	1444
Mean.	17.9	15.4	10.3	7.51	5.98	7.61	30.8	129	311	150	54.4	48.1
Max..	22	20	13	10	8.7	11	79	317	398	290	80	153
Min..	11	11	7.1	5.8	5.2	5.5	6.4	46	232	83	26	22
Acre-ft.	1100	918	634	462	332	468	1840	7930	18490	9250	3340	2860

Total run-off for water year 1937-38=47,620 acre-feet.

*Estimated.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Boulder Creek Near Orodell, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	49	7.4	40	24	30	29	21	57	171	207	114	64
2....	48	6.5	46	....	30	29	25	34	180	261	104	69
3....	48	5.4	41	....	30	28	27	53	183	214	98	73
4....	28	8.0	41	....	32	30	20	44	177	204	87	73
5....	46	7.2	33	....	28	29	28	62	168	195	78	67
6....	38	6.8	21	....	29	27	25	82	165	204	74	66
7....	38	8.8	42	....	39	20	25	91	171	218	72	60
8....	32	32	44	....	34	34	20	98	156	218	63	66
9....	34	38	45	....	37	48	19	67	123	210	59	57
10....	33	27	37	....	31	47	24	98	114	283	55	60
11....	28	36	46	....	24	44	27	102	110	231	56	59
12....	52	33	22	....	26	40	37	112	121	195	54	49
13....	52	35	21	....	25	24	42	123	145	198	50	49
14....	57	29	44	....	18	18	38	138	145	204	50	50
15....	40	23	50	....	27	35	47	177	135	207	53	54
16....	45	36	43	....	20	45	67	256	138	204	46	50
17....	32	32	49	....	25	40	43	335	142	195	56	44
18....	39	26	41	....	26	45	31	311	156	195	78	49
19....	22	24	19	....	29	40	62	296	153	168	76	51
20....	35	32	23	....	30	25	63	283	142	162	63	48
21....	41	33	49	....	32	21	74	278	150	162	74	50
22....	40	22	47	....	41	38	84	223	168	150	66	48
23....	28	23	52	....	26	37	80	218	274	130	66	57
24....	29	22	37	....	32	44	64	244	306	108	63	82
25....	35	22	18	....	32	39	53	287	345	110	64	64
26....	38	20	25	....	30	31	70	287	278	117	59	57
27....	43	38	12	....	34	60	80	256	207	119	57	49
28....	32	33	23	....	30	30	84	244	162	130	60	46
29....	32	21	30	....	....	63	70	239	165	123	60	38
30....	34	44	25	....	....	30	63	207	171	114	60	35
31....	22	....	30	....	....	35	....	156	....	114	64	....
Total	1170	731.1	1096	....	827	1105	1413	5458	5221	5550	2079	1684
Mean.	37.7	24.4	35.4	32	29.5	35.6	47.1	176	174	179	67.1	56.1
Max..	57	44	52	....	41	63	84	335	345	283	114	82
Min..	22	5.4	12	....	18	18	19	34	110	108	46	35
Acre-ft.	2320	1450	2170	1970	1640	2190	2800	10830	10360	11010	4120	3340

Total run-off for water year 1936-37==54,200 acre-feet.

Discharge of Boulder Creek Near Orodell, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	35	32	21	27	32	35	121	223	585	123	104
2....	26	39	36	27	30	37	31	121	210	511	123	186
3....	27	38	26	36	27	41	28	125	204	419	121	449
4....	25	40	24	36	24	47	33	130	292	355	117	265
5....	25	21	13	34	28	26	24	119	455	345	112	239
6....	29	17	31	32	20	19	27	117	425	316	112	195
7....	27	18	41	46	32	32	24	114	385	311	98	150
8....	28	15	35	36	33	44	21	106	385	287	100	150
9....	21	21	33	32	39	39	24	119	419	265	91	140
10....	17	21	33	34	29	33	29	117	483	239	91	132
11....	20	19	36	36	30	29	57	125	462	239	94	123
12....	21	21	30	29	21	27	66	132	455	227	96	140
13....	15	18	44	32	14	15	59	148	469	231	102	125
14....	19	18	37	35	38	33	66	150	455	270	100	114
15....	12	21	39	19	43	23	125	135	449	283	98	104
16....	19	14	42	28	36	20	100	145	431	270	91	96
17....	17	21	29	38	37	32	96	145	395	256	89	98
18....	21	16	26	33	49	24	114	145	311	239	91	87
19....	17	21	29	29	44	16	117	128	231	227	93	87
20....	18	27	37	45	18	12	114	135	316	207	89	87
21....	24	32	59	33	39	26	110	150	395	204	84	79
22....	20	39	29	16	41	24	112	162	634	192	73	66
23....	23	26	32	16	47	27	108	165	712	177	76	72
24....	25	21	26	35	44	32	94	183	600	183	79	82
25....	26	20	22	34	43	37	98	165	490	183	93	72
26....	20	18	29	29	27	14	114	183	469	156	94	76
27....	25	26	26	28	27	16	132	180	469	140	79	74
28....	29	34	21	29	40	47	123	198	497	159	82	64
29....	42	35	24	40	....	49	128	195	497	132	89	69
30....	22	35	26	33	....	44	121	239	548	123	110	69
31....	15	....	35	29	....	40	....	235	....	135	94	....
Total	707	747	982	980	927	937	2330	4632	12766	7866	2975	3794
Mean.	22.8	24.9	31.7	31.6	33.1	30.2	77.7	149	426	254	96.0	126
Max..	42	40	59	46	49	49	132	239	712	585	123	449
Min..	12	14	13	16	14	12	21	106	204	123	73	64
Acre-ft.	1400	1480	1950	1940	1840	1860	4620	9190	25320	15600	5900	7530

Total run-off for water year 1937-38==78,630 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Boulder Creek at Mouth Near Longmont, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	48	33	55	....	....	55	25	112	34	262	6.8	2.0
2....	46	36	59	....	....	56	21	98	63	287	6.2	2.6
3....	50	35	62	....	....	57	20	73	72	190	5.0	2.0
4....	51	37	61	....	....	58	22	78	50	142	3.2	2.0
5....	39	34	70	....	....	57	21	49	132	105	2.6	4.4
6....	61	30	61	....	....	64	21	50	66	45	2.6	5.6
7....	58	31	49	....	....	61	28	39	35	9.4	3.2	4.4
8....	47	26	71	....	....	51	34	38	71	6.2	2.6	2.6
9....	38	23	79	....	....	55	46	30	148	4.4	3.8	3.2
10....	41	21	81	....	....	53	41	16	188	15	4.4	5.0
11....	34	20	78	....	....	40	52	8.7	114	24	5.6	2.6
12....	33	20	70	....	....	31	44	1.9	83	10	5.6	2.6
13....	33	21	61	....	....	35	57	3.2	74	8.7	6.2	1.8
14....	33	22	50	....	....	28	60	5.0	74	9.4	6.2	2.0
15....	40	23	72	....	....	29	56	4.4	134	8.0	5.6	1.7
16....	35	18	79	....	....	43	41	2.6	120	10	5.6	1.5
17....	34	19	78	....	....	61	53	7.4	94	11	5.6	1.7
18....	32	28	77	*48	....	59	58	8.7	113	6.8	5.6	1.7
19....	30	29	78	....	....	77	50	9.4	89	4.4	6.2	1.7
20....	28	28	66	....	....	66	76	2.6	120	3.2	6.8	2.6
21....	45	36	53	....	....	47	80	5.0	64	5.0	6.8	3.8
22....	41	36	81	....	....	36	100	4.4	28	5.0	6.2	5.6
23....	40	28	71	....	....	64	123	5.6	3.8	7.4	6.2	5.6
24....	28	28	76	....	*91	56	123	8.0	3.8	10	5.0	6.2
25....	23	28	62	....	....	38	102	12	36	11	2.6	6.8
26....	33	31	36	....	....	35	100	18	523	6.8	2.0	8.0
27....	30	26	47	....	....	31	117	11	560	4.4	1.7	6.2
28....	38	46	31	....	....	38	138	9.4	384	8.0	1.7	6.2
29....	29	45	72	....	....	28	148	8.7	285	8.7	1.6	5.6
30....	23	28	79	....	....	33	135	120	276	6.2	1.5	2.0
31....	33	....	75	....	....	24	....	70	....	6.2	1.6	....
Total	1174	866	2040	1705	1680	1466	1992	909.0	3987.6	1240.2	136.3	109.7
Mean.	37.9	28.9	65.8	†55	†60	47.3	66.4	29.3	133	40.0	4.40	3.66
Max.	61	46	81	....	....	77	148	120	560	287	6.8	8.0
Min.	23	18	31	....	....	24	20	1.9	3.8	3.2	1.5	1.5
Acre-ft.	2330	1720	4050	3380	3330	2910	3950	1800	7910	2460	270	218

Total run-off for water year 1936-37=34,330 acre-feet.

*Discharge measurement.

†Estimated.

Discharge of Boulder Creek at Mouth Near Longmont, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.8	3.4	6.8	17	20	16	22	188	349	567	4.0	2.8
2....	1.9	3.4	10	16	22	8.8	21	228	168	548	3.8	160
3....	3.2	4.4	11	16	23	6.8	17	353	3.6	471	5.0	2300
4....	3.2	5.4	11	15	24	9.8	14	587	2.6	376	6.4	1630
5....	3.0	7.5	9.8	15	27	12	27	475	50	214	2.2	1020
6....	3.2	4.7	8.4	15	30	9.3	35	370	32	80	3.4	624
7....	3.4	4.7	7.3	15	34	6.8	34	390	6.1	19	3.6	415
8....	4.4	4.0	6.1	15	39	5.8	30	356	2.6	11	3.6	339
9....	4.0	3.8	10	15	43	8.0	24	230	2.4	11	3.6	366
10....	3.6	3.8	12	15	46	12	19	282	22	7.5	4.0	385
11....	3.4	3.8	15	15	42	14	20	250	76	3.8	3.6	400
12....	3.6	3.6	21	*15	44	8.4	35	291	217	3.2	3.6	723
13....	4.4	3.6	23	16	32	10	41	483	258	3.6	3.6	751
14....	4.7	3.6	21	18	18	15	52	528	241	5.4	3.6	515
15....	4.4	3.6	21	20	18	16	156	559	194	71	3.6	425
16....	5.0	3.6	26	20	23	7.2	146	544	179	84	2.8	380
17....	4.4	3.8	23	20	41	7.2	88	509	241	62	2.0	348
18....	4.4	3.4	17	19	32	6.1	87	460	279	104	1.8	303
19....	5.0	4.0	15	19	42	5.8	146	432	158	43	1.5	261
20....	5.0	5.4	13	19	38	4.7	185	233	144	30	2.6	249
21....	5.8	8.4	14	19	24	4.0	168	255	206	12	2.0	230
22....	7.2	11	16	18	39	5.0	152	517	319	16	2.0	202
23....	7.2	6.8	16	17	41	6.4	197	695	619	9.8	2.6	193
24....	6.4	6.4	16	14	47	5.4	190	695	611	7.2	3.4	184
25....	7.5	5.8	16	13	42	5.8	160	635	513	6.4	2.4	184
26....	6.4	5.4	15	16	43	13	175	623	552	3.8	1.3	168
27....	4.7	4.4	16	17	34	12	310	603	498	3.2	1.3	129
28....	5.4	4.7	16	18	29	14	253	603	439	2.4	1.4	119
29....	5.0	4.4	17	18	....	19	214	591	373	3.4	1.8	99
30....	3.6	4.7	17	18	....	28	190	587	418	3.0	2.0	96
31....	3.4	....	18	19	....	26	....	502	....	4.0	6.1	....
Total	138.6	145.5	464.3	522	937	328.3	3208	14054	7173.3	2785.7	106.3	13200.8
Mean.	4.47	4.85	15.0	16.8	33.5	10.6	107	453	239	89.9	3.43	440
Max.	7.5	11	26	20	47	28	310	695	619	567	13	2300
Min.	1.8	3.4	6.1	13	18	4	14	188	2.4	2.4	1.3	2.8
Acre-ft.	275	289	921	1040	1860	651	6360	27880	14232	5530	211	26180

Total run-off for water year 1937-38=85,430 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North St. Vrain Creek at Longmont Dam Near Lyons, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	46	33	16	9.7	5.1	9.0	11	73	252	356	98	53
2....	40	30	16	9.0	5.6	9.5	13	68	352	315	92	50
3....	39	14	16	7.5	6.4	9.5	16	64	490	284	84	48
4....	39	30	20	6.9	7.1	9.5	14	63	509	255	81	50
5....	36	36	18	6.9	8.6	10	13	69	454	235	74	64
6....	33	33	11	6.7	9.0	12	14	81	381	231	72	68
7....	30	30	18	5.4	9.9	12	14	98	319	340	68	73
8....	29	25	21	5.1	10	11	13	113	288	255	63	71
9....	29	29	20	5.4	10	12	15	129	280	231	56	63
10....	30	29	19	7.7	9.7	12	22	151	262	200	53	58
11....	30	27	18	8.4	9.7	12	30	146	288	186	52	54
12....	30	25	17	8.6	9.7	12	29	146	315	189	51	50
13....	30	26	16	8.8	9.3	11	33	148	276	203	81	44
14....	29	27	18	8.6	9.3	11	40	175	272	222	86	44
15....	28	29	18	8.2	9.3	11	76	219	266	228	84	40
16....	30	26	18	7.9	9.5	12	77	244	288	212	93	36
17....	29	26	18	7.5	9.3	9.9	67	252	323	189	108	31
18....	27	26	17	7.1	9.3	11	52	231	319	175	111	30
19....	25	22	17	7.1	9.3	10	62	252	315	162	101	23
20....	33	24	16	6.9	9.3	12	71	228	276	148	88	23
21....	32	24	16	6.7	9.0	13	77	200	315	135	80	19
22....	26	22	16	6.4	9.0	12	87	180	419	121	72	19
23....	23	15	15	6.0	9.0	14	81	222	402	117	62	20
24....	26	16	15	5.1	9.3	10	78	215	352	111	54	23
25....	29	17	14	4.2	9.3	11	80	241	377	106	59	23
26....	28	20	14	4.3	9.0	9.5	88	209	578	121	46	19
27....	26	16	13	4.3	9.0	9.7	99	212	462	117	44	16
28....	29	15	13	4.3	9.0	10	93	248	377	135	45	15
29....	29	16	14	4.0	....	9.5	82	280	336	123	55	15
30....	30	17	12	4.2	....	9.5	76	319	327	113	62	17
31....	34	....	9.5	4.5	....	11	....	258	....	117	54	....
Total	954	725	499.5	203.4	248.0	337.6	1523	5534	10470	5932	2229	1159
Mean.	30.8	24.2	16.1	6.56	8.86	10.9	50.8	179	349	191	71.9	38.6
Max..	46	36	21	9.7	10	14	99	319	578	356	111	73
Min..	23	14	9.5	4.0	5.1	9	11	63	252	106	44	15
Acre-ft.	1890	1440	991	403	492	670	3020	10980	20770	11770	4420	2300

Total run-off for water year 1936-37=59,150 acre-feet.

Discharge of North St. Vrain Creek at Longmont Dam Near Lyons, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	54	20	12	11	9.0	11	12	206	458	398	108	86
2....	40	19	17	12	9.0	12	12	168	476	360	106	241
3....	30	19	18	12	8.6	13	14	162	514	327	106	718
4....	26	19	16	12	8.4	14	14	162	533	296	104	467
5....	23	13	14	11	7.7	10	17	144	519	269	101	323
6....	23	18	16	11	7.7	9.7	23	127	514	248	94	272
7....	23	19	14	11	7.5	9.9	18	119	467	222	108	212
8....	23	13	9.3	11	8.6	9.5	19	111	462	212	110	194
9....	25	19	9.5	11	8.6	12	20	108	427	209	115	175
10....	22	19	18	10	9.0	9.7	26	110	467	203	113	151
11....	20	17	22	11	8.8	8.2	26	110	432	194	115	168
12....	20	16	22	11	9.3	11	30	111	458	189	117	189
13....	21	16	17	11	7.5	12	34	115	467	186	113	186
14....	20	19	14	11	7.9	13	41	140	427	244	106	158
15....	19	15	16	11	6.9	10	98	162	360	252	93	137
16....	23	14	16	11	6.2	9.9	106	235	369	209	103	131
17....	23	13	15	11	8.8	12	119	225	406	197	103	123
18....	25	12	14	11	7.3	13	142	215	415	206	104	104
19....	23	11	13	11	7.3	9.5	170	206	369	192	96	94
20....	22	23	9.3	11	7.3	13	146	206	406	203	94	90
21....	25	25	11	10	7.3	15	142	231	523	186	94	81
22....	23	22	13	11	7.5	12	146	276	648	165	90	77
23....	23	18	14	10	7.5	9.0	168	292	533	153	87	73
24....	22	20	13	9.5	7.7	15	162	276	458	144	86	72
25....	23	17	14	8.2	7.9	12	165	280	454	137	77	67
26....	23	16	13	9.3	8.8	7.5	170	299	398	133	90	63
27....	22	8.2	13	10	9.9	12	165	348	394	129	82	60
28....	20	12	13	10	10	18	144	390	390	131	78	56
29....	20	19	13	9.3	....	14	153	449	415	127	80	52
30....	20	15	13	8.8	....	12	162	449	436	119	84	50
31....	20	....	12	9.0	....	9.5	....	415	....	115	74	....
Total	746	506.2	444.1	327.1	228.0	358.4	2664	6847	13595	6355	3031	4870
Mean.	24.1	16.9	14.3	10.6	8.14	11.6	88.8	221	453	205	97.8	162
Max..	54	25	22	12	10	18	170	449	648	398	117	718
Min..	19	8.2	9.3	8.2	6.2	7.5	12	108	360	115	74	50
Acre-ft.	1480	1000	881	649	452	711	5280	13580	26970	12600	6010	9660

Total run-off for water year 1937-38=79,270 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of St. Vrain Creek at Lyons, Colo., for Year Ending Sept. 30, 1937.											
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1....	65	46	14	9.6	2.8	9.6	16	98	280	482	147
2....	61	43	17	6.5	3.0	11	18	92	380	405	127
3....	57	24	17	6.5	3.6	11	24	83	621	328	117
4....	53	33	9.0	6.0	3.4	10	26	77	673	300	107
5....	53	46	5.5	5.5	7.5	12	24	85	578	300	94
6....	43	44	3.8	5.0	8.5	14	24	98	455	332	85
7....	26	38	3.4	4.0	9.6	16	26	132	353	455	79
8....	20	31	3.8	4.0	11	16	26	164	304	380	77
9....	22	37	10	4.0	9.6	14	26	184	288	324	74
10....	20	37	13	3.6	10	15	31	221	269	269	65
11....	18	34	15	4.0	14	16	44	197	304	232	87
12....	18	31	15	6.0	13	15	47	200	361	232	92
13....	18	31	14	7.0	14	14	47	214	312	258	98
14....	17	31	16	6.5	14	14	55	273	296	284	94
15....	16	30	16	8.0	13	13	71	336	254	288	77
16....	15	31	18	9.0	13	14	92	357	320	269	79
17....	13	31	18	8.5	13	15	85	357	390	228	117
18....	11	31	17	7.0	13	14	61	349	328	204	117
19....	11	26	16	7.0	13	16	69	385	340	191	107
20....	20	28	14	6.0	11	13	81	361	292	167	83
21....	31	29	14	5.5	12	13	77	336	340	153	79
22....	35	26	13	5.0	14	13	100	308	494	140	76
23....	36	23	14	4.5	14	15	110	344	460	153	65
24....	38	14	14	3.8	13	17	85	340	435	142	57
25....	42	16	9.6	3.4	11	16	79	385	455	142	62
26....	40	20	14	3.6	12	17	119	332	937	167	73
27....	37	20	11	3.6	11	16	140	328	673	167	69
28....	43	16	8.0	3.6	11	15	127	361	516	178	66
29....	42	14	9.0	3.2	....	16	114	380	435	191	85
30....	45	16	6.0	3.0	....	14	100	357	415	161	102
31....	48	....	5.0	2.4	....	16	....	288	....	158	90
Total	1014	877	373.1	165.3	298.0	440.6	1944	8022	12558	7680	2747
Mean.	32.7	29.2	12.0	5.33	10.6	14.2	64.8	259	419	248	88.6
Max..	65	46	18	9.6	14	17	140	385	937	482	147
Min..	11	14	3.4	2.4	2.8	9.6	16	77	254	140	57
Acre-ft.	2010	1740	740	328	591	874	3860	15910	24910	15230	5450

Total run-off for water year 1936-37=74,740 acre-feet.

Discharge of St. Vrain Creek at Lyons, Colo., for Year Ending Sept. 30, 1938.											
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1....	48	17	14	14	7.7	3.2	13	362	666	547	151
2....	51	20	17	12	7.4	3.0	12	304	673	451	148
3....	38	22	25	14	7.4	3.2	14	292	680	415	148
4....	31	22	22	13	7.4	4.6	17	288	762	393	143
5....	30	21	18	13	6.5	3.2	20	266	700	401	132
6....	30	18	18	14	6.2	2.4	28	230	713	366	111
7....	27	20	14	15	6.8	2.2	23	213	673	327	114
8....	25	21	8.0	15	7.4	2.4	22	196	659	308	119
9....	27	17	11	14	8.8	3.0	27	186	596	296	135
10....	24	24	14	14	8.0	2.7	32	189	640	285	137
11....	22	24	26	13	7.7	2.6	39	181	565	274	154
12....	23	24	26	14	8.8	3.0	44	189	578	266	148
13....	24	15	24	17	6.2	3.0	47	203	603	248	140
14....	23	12	13	18	7.1	3.4	64	259	559	406	137
15....	22	19	16	20	5.6	3.0	193	292	442	362	119
16....	25	15	18	20	5.3	2.7	196	384	465	296	98
17....	25	16	16	17	6.8	3.0	210	366	505	285	81
18....	28	17	13	17	6.5	4.2	266	344	511	285	77
19....	10	14	11	16	6.8	5.3	319	319	424	270	68
20....	4.6	24	7.4	18	6.2	7.7	255	312	451	292	62
21....	4.4	33	8.0	14	6.2	11	241	344	634	255	68
22....	4.2	26	11	17	5.3	8.8	238	437	892	227	68
23....	4.6	19	13	14	5.9	5.9	274	534	693	220	66
24....	4.4	25	12	7.4	6.8	8.0	281	476	693	196	63
25....	4.4	23	14	8.8	6.5	8.0	281	456	659	186	66
26....	5.0	19	12	11	6.8	8.0	288	471	565	178	98
27....	5.0	8.8	13	11	7.4	7.1	292	528	565	183	98
28....	4.4	8.8	14	12	7.1	25	248	596	565	181	102
29....	5.6	24	14	7.4	....	19	262	734	609	186	104
30....	7.1	23	15	7.1	....	16	285	755	640	167	129
31....	9.6	....	14	7.4	....	12	....	640	....	159	102
Total	599.3	596.6	471.4	425.1	192.6	196.6	4531	11346	18657	8911	3386
Mean.	19.3	19.9	15.2	13.7	6.88	6.34	151	366	622	287	109
Max..	51	33	26	20	8.8	25	319	755	970	547	154
Min..	4.2	8.8	7.1	7.1	5.3	2.2	12	181	424	159	62
Acre-ft.	1190	1180	935	843	382	390	8990	22500	37010	17670	6720

Total run-off for water year 1937-38=113,400 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of St. Vrain Creek at Mouth Near Platteville, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	181	133	108	....	....	100	79	176	227	938	131	156
2....	172	128	115	....	....	100	72	163	218	872	122	102
3....	165	129	119	....	....	100	70	139	416	690	112	86
4....	160	128	123	....	....	100	70	131	364	476	92	318
5....	148	122	127	....	....	100	72	113	665	375	92	186
6....	154	118	143	....	....	100	70	96	452	237	93	102
7....	165	118	113	....	....	100	84	86	309	143	82	87
8....	152	116	131	....	....	100	102	78	281	115	73	86
9....	139	112	152	....	....	*102	108	77	409	88	75	73
10....	133	116	154	....	*95	112	108	75	397	86	77	68
11....	131	110	145	....	....	100	104	80	316	141	78	107
12....	126	107	158	....	....	93	100	64	287	163	75	126
13....	126	107	148	....	....	94	99	54	242	160	80	135
14....	124	105	129	*90	....	90	107	56	220	154	87	128
15....	126	105	143	....	....	87	104	49	464	148	87	128
16....	124	102	158	....	....	100	96	47	436	139	87	135
17....	124	96	160	....	....	126	90	46	319	143	86	96
18....	115	104	154	....	....	126	108	49	266	145	92	94
19....	113	105	156	....	....	143	105	48	287	154	93	77
20....	124	104	143	....	....	139	115	66	364	131	94	70
21....	154	105	124	....	....	115	128	58	287	104	93	70
22....	141	115	141	....	....	100	135	60	220	94	92	70
23....	135	105	143	....	....	112	186	77	163	83	93	69
24....	133	102	131	....	....	115	202	84	112	87	87	70
25....	122	102	141	....	....	108	181	99	179	88	128	82
26....	141	102	116	....	....	100	158	141	1520	100	133	86
27....	148	102	112	....	....	96	179	124	1950	113	135	84
28....	154	103	96	....	....	99	188	112	1610	120	141	88
29....	154	105	95	....	....	94	204	115	1150	118	154	83
30....	131	105	95	....	....	87	197	306	984	108	156	75
31....	133	....	95	....	....	86	....	378	....	122	158	....
Total	4348	3311	4068	2945	2716	3224	3621	3247	15114	6635	3178	3137
Mean.	140	110	131	95	97	104	121	105	504	214	103	105
Max.	181	133	160	....	....	143	204	378	1950	938	158	318
Min.	113	96	95	....	....	86	70	46	112	83	73	68
Acre-ft.	8620	6570	8070	5840	5390	6390	7180	6440	29980	13160	6300	6220

Total run-off for water year 1936-37=110,200 acre-feet.

*Discharge measurement.

Discharge of St. Vrain Creek at Mouth Near Platteville, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	77	54	64	60	84	73	77	385	730	976	116	112
2....	80	54	64	55	90	69	77	404	416	892	105	374
3....	79	56	69	58	94	66	73	495	195	826	98	3200
4....	80	57	73	58	94	66	69	490	130	678	97	5300
5....	76	58	71	57	95	69	72	922	125	522	93	2910
6....	73	63	69	62	95	69	86	683	157	282	83	2340
7....	71	61	68	63	92	65	84	683	127	181	95	1690
8....	76	61	68	62	95	65	83	608	115	149	98	1190
9....	81	62	70	59	97	69	79	432	101	124	93	934
10....	80	59	80	59	97	70	74	408	97	129	113	740
11....	77	60	95	57	96	72	68	396	142	160	133	745
12....	77	59	97	62	97	71	72	381	232	148	137	1220
13....	78	60	80	66	91	66	91	585	450	142	148	1820
14....	76	60	58	73	84	64	98	652	500	175	153	1340
15....	78	60	62	77	79	65	230	724	377	263	135	1010
16....	82	60	69	76	70	64	377	782	352	302	124	910
17....	81	61	73	74	65	62	255	761	366	274	164	782
18....	73	60	70	74	69	60	217	698	490	321	173	704
19....	68	61	64	80	74	61	287	698	388	279	162	594
20....	68	67	57	76	78	60	404	513	293	220	149	540
21....	67	71	55	84	81	59	359	454	381	202	148	486
22....	68	90	55	88	85	61	312	756	750	167	144	432
23....	69	83	57	86	86	62	328	1440	1310	151	129	396
24....	66	79	57	83	90	60	352	1480	1420	155	95	362
25....	63	71	59	84	86	59	328	1410	1230	149	92	355
26....	63	70	55	86	88	66	335	1260	1150	140	118	331
27....	60	66	58	87	83	71	518	1180	1050	144	124	293
28....	58	66	59	90	77	69	558	1170	880	137	121	266
29....	59	65	59	87	....	71	446	1210	730	121	109	247
30....	58	64	62	75	....	77	416	1360	777	121	93	242
31....	56	....	65	75	....	76	....	1190	....	118	105	....
Total	2218	1908	2062	2233	2412	2058	6825	25270	15461	8648	3747	31865
Mean.	71.5	63.6	66.5	72.0	86.1	66.4	228	815	515	279	121	1062
Max.	82	83	97	90	97	77	558	1480	1420	976	173	5300
Min.	56	54	55	55	65	59	68	381	97	118	83	112
Acre-ft.	4400	3780	4090	4430	4780	4080	13540	50120	30670	17150	7430	63200

Total run-off for water year 1937-38=207,700 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Left Hand Creek at Mouth at Longmont, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	14	7.2	....	....	3.8	3.6	24	26	91	6.7	9.6
2....	24	13	9.0	....	....	3.8	3.3	21	40	90	8.0	8.7
3....	24	11	8.4	....	....	3.8	3.6	17	158	71	6.1	9.0
4....	21	11	9.0	....	....	3.8	6.9	13	137	48	5.4	10
5....	16	14	10	....	....	3.9	5.5	11	143	44	5.1	10
6....	15	14	9.4	....	....	3.9	4.7	11	110	24	4.9	8.0
7....	13	16	7.5	....	....	3.9	5.5	10	87	17	4.9	7.1
8....	13	14	8.4	....	....	3.9	4.5	11	76	13	5.0	9.0
9....	14	14	7.5	....	....	3.9	4.2	9.8	70	14	5.1	8.2
10....	14	14	7.8	....	....	3.9	4.0	8.6	57	20	5.3	6.8
11....	14	14	8.1	....	....	3.9	3.5	5.2	39	19	5.3	7.2
12....	13	12	8.4	....	....	3.9	3.0	6.0	36	16	5.3	9.8
13....	13	12	9.0	....	....	5.1	3.0	7.4	30	15	5.0	8.6
14....	13	12	8.4	....	....	4.8	3.8	6.0	34	16	5.0	8.3
15....	13	10	7.2	....	....	3.6	4.7	6.0	66	17	5.0	9.0
16....	13	9.0	6.9	....	....	3.9	4.7	4.0	22	17	5.0	9.0
17....	13	9.4	6.9	....	....	4.5	5.0	3.5	17	17	5.0	8.2
18....	9.8	9.8	7.8	*3.7	....	4.2	4.2	4.5	42	20	5.0	7.7
19....	9.8	9.0	8.4	....	....	3.9	4.7	5.0	54	17	4.8	7.0
20....	9.8	9.4	7.2	....	....	4.2	5.5	2.8	71	16	4.8	7.9
21....	12	9.4	6.9	....	....	3.9	5.2	3.3	42	13	5.0	6.7
22....	12	9.0	6.9	....	....	3.6	5.2	3.0	28	10	5.0	6.6
23....	11	8.4	7.5	....	....	3.9	2.5	2.5	15	9.0	5.0	6.3
24....	12	8.1	7.5	....	*3.8	3.6	22	3.8	4.5	11	6.0	6.0
25....	12	8.7	6.9	....	....	5.1	24	6.0	13	13	6.0	6.7
26....	13	8.4	6.0	....	....	4.2	32	4.7	128	11	7.0	6.3
27....	12	8.7	6.0	....	....	5.1	29	5.5	126	11	8.4	6.1
28....	16	8.7	6.0	....	....	3.6	30	5.2	97	9.0	8.4	5.8
29....	13	8.4	6.0	....	....	3.6	28	6.6	103	7.9	8.6	5.8
30....	13	7.2	6.0	....	....	3.9	21	49	86	6.3	9.6	5.7
31....	13	....	6.0	....	....	3.3	....	21	....	6.6	11	....
Total	444.4	326.6	234.2	139.5	112	124.4	309.3	297.4	1957.5	709.8	186.7	231.1
Mean...	14.3	10.9	7.55	†4.5	†4.0	4.01	10.3	9.59	65.2	22.9	6.02	7.70
Max....	32	16	10	....	....	5.1	32	49	158	91	11	10
Min....	7.8	7.2	6.0	....	....	3.3	3.0	2.5	4.5	6.3	4.8	5.7
Acre-ft.	881	648	465	277	222	247	613	590	3880	1410	370	458

Total run-off for water year 1936-37=10,060 acre-feet.

*Discharge measurement.

†Estimated.

Discharge of Left Hand Creek at Mouth at Longmont, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.3	5.3	4.3	5.9	3.2	3.2	3.6	80	40	22	8.1	8.5
2....	6.0	5.4	4.1	6.0	3.0	3.2	3.8	74	36	23	7.8	148
3....	6.6	4.9	4.1	6.8	2.8	3.2	3.6	77	35	27	7.4	432
4....	6.2	4.9	4.2	6.5	2.8	3.2	3.5	74	36	24	6.8	188
5....	5.7	4.9	4.1	6.0	2.7	3.4	3.8	70	35	19	7.2	123
6....	5.6	5.3	4.0	6.0	2.6	3.2	4.3	70	34	16	7.6	81
7....	5.8	4.8	4.0	6.1	2.7	3.1	4.2	68	25	13	7.5	63
8....	5.8	4.6	4.0	6.7	2.8	3.2	4.0	64	20	14	7.4	56
9....	5.9	4.5	4.0	6.8	2.8	3.4	3.8	59	18	15	7.2	49
10....	5.8	4.7	4.0	6.8	2.8	3.3	3.2	53	16	16	7.2	49
11....	5.6	5.0	4.2	6.5	2.9	3.2	3.0	50	16	17	7.4	51
12....	5.6	4.5	4.2	6.0	2.9	3.1	2.9	49	16	16	7.4	67
13....	6.3	4.4	4.4	6.8	2.8	3.1	2.8	48	19	16	7.5	60
14....	6.0	4.4	4.6	6.6	2.7	3.1	3.4	47	19	25	8.4	52
15....	6.4	4.4	4.8	7.0	2.8	3.1	7.1	52	16	21	8.1	47
16....	6.7	4.3	4.9	6.8	3.0	3.1	5.4	61	13	17	7.8	44
17....	6.3	4.3	4.9	6.7	3.0	3.1	21	61	14	17	7.9	46
18....	6.0	4.3	4.8	6.5	3.0	3.2	77	57	14	14	8.4	46
19....	6.3	4.8	4.8	6.3	3.0	3.2	105	57	16	13	8.5	44
20....	6.1	4.6	4.0	6.4	3.1	3.2	93	54	19	10	7.8	42
21....	6.1	4.5	4.5	6.4	3.1	3.1	83	60	30	9.2	7.5	39
22....	6.2	4.4	4.5	6.5	3.3	3.2	76	79	34	7.5	7.4	37
23....	6.3	4.4	4.6	6.5	3.3	3.3	81	98	28	8.2	7.2	36
24....	5.7	4.6	4.8	5.9	3.2	3.2	84	103	20	7.6	7.2	34
25....	5.8	4.3	5.0	5.8	3.2	3.2	86	94	27	8.8	7.2	32
26....	5.8	4.4	5.0	6.4	3.2	3.6	83	84	31	7.8	8.5	28
27....	5.8	4.6	5.0	6.5	3.2	3.6	94	76	28	7.4	8.4	27
28....	5.5	4.3	5.3	6.5	3.1	3.6	83	67	23	6.7	8.5	26
29....	5.2	4.1	5.8	5.5	....	3.7	83	60	23	6.7	8.5	24
30....	5.2	4.1	6.0	5.0	....	3.7	77	55	34	6.8	7.5	22
31....	5.3	....	6.2	4.0	....	3.8	....	45	....	7.4	7.6	....
Total	183.9	138.0	143.1	194.2	83.0	101.8	1188.4	2046	735	439.1	238.9	2001.5
Mean...	5.93	4.60	4.62	6.26	2.96	3.28	39.6	66.0	24.5	14.2	7.71	66.7
Max....	6.7	5.4	6.2	7.0	3.3	3.8	105	103	40	27	8.5	432
Min....	5.2	4.1	4.0	4.0	2.6	3.1	2.8	45	13	6.7	6.8	8.5
Acre-ft.	365	274	284	385	165	202	2360	4060	1460	871	474	3970

Total run-off for water year 1937-38=14,880 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Big Thompson River Near Estes Park, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	76	57	18	....	....	....	16	71	619	565	166	89
2....	74	57	17	....	....	....	18	57	710	525	151	91
3....	73	45	17	....	....	....	21	55	698	445	136	89
4....	69	35	17	....	....	....	20	45	704	416	127	89
5....	67	45	21	....	....	....	18	69	555	384	118	89
6....	67	50	20	....	....	....	18	110	480	375	112	82
7....	60	48	20	....	....	....	20	127	431	388	108	86
8....	60	36	21	....	....	....	18	169	421	375	103	82
9....	58	40	25	....	....	....	20	213	445	329	97	74
10....	57	42	22	....	....	....	25	291	416	310	93	71
11....	53	45	22	....	....	....	34	267	520	298	93	65
12....	52	40	22	....	....	....	34	219	659	302	91	62
13....	48	40	21	....	....	....	35	190	505	416	97	58
14....	46	36	20	....	....	....	*44	277	505	375	95	53
15....	48	32	*20	....	....	....	50	402	525	333	91	52
16....	50	32	22	....	....	....	60	455	608	314	110	52
17....	50	31	23	....	....	....	56	480	704	277	130	50
18....	45	32	23	....	....	....	51	436	767	273	210	45
19....	40	31	23	*10	....	....	65	470	733	263	156	43
20....	53	38	25	....	....	....	69	460	659	241	130	40
21....	53	31	23	....	....	....	69	485	744	219	114	37
22....	46	27	21	....	....	....	93	460	1020	196	103	37
23....	48	18	22	....	....	*18	108	550	954	185	93	53
24....	45	15	21	....	*10	....	97	515	825	193	91	57
25....	46	20	20	....	....	....	98	555	859	180	108	50
26....	48	25	19	....	....	....	98	470	1080	174	99	45
27....	43	19	17	....	....	....	99	460	813	177	93	38
28....	50	17	17	....	....	....	95	555	636	196	91	38
29....	46	16	17	....	....	....	89	664	540	202	103	36
30....	52	16	14	....	....	....	84	681	520	193	110	38
31....	55	....	10	....	....	....	....	560	....	193	99	....
Total	1678	1016	620	....	....	....	1622	10818	19655	9312	3518	1791
Mean.	54.1	33.9	20.0	†9.0	†12.0	†17.0	54.1	349	655	300	113	59.7
Max.	76	57	25	....	....	....	108	681	1080	565	210	91
Min.	40	15	10	....	....	....	16	45	416	174	91	36
Acre-ft.	3330	2020	1230	553	666	1050	3220	21460	38990	18470	6980	3550

Total run-off for water year 1936-37=101,500 acre-feet.

*Discharge measurement.

†Estimated.

Discharge of Big Thompson River Near Estes Park, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	77	36	20	21	12	20	15	323	781	710	202	122
2....	63	34	23	22	12	20	20	244	846	616	199	212
3....	56	33	28	22	12	20	22	225	924	546	205	894
4....	51	32	26	21	12	18	25	225	912	528	199	569
5....	48	24	25	19	12	18	26	193	876	501	183	470
6....	50	24	23	18	12	19	*27	160	942	452	173	398
7....	50	36	22	18	*12	19	22	145	708	398	161	378
8....	47	29	18	17	12	19	15	131	697	378	156	367
9....	50	29	17	15	13	20	14	138	582	394	161	352
10....	48	32	20	16	15	18	16	122	613	418	170	344
11....	47	27	30	*17	14	16	14	108	587	410	170	348
12....	44	27	28	19	13	19	15	118	644	390	170	322
13....	40	29	26	19	13	22	17	142	719	378	186	326
14....	38	29	24	19	12	22	29	193	602	363	170	276
15....	39	29	24	20	12	20	39	253	437	374	167	235
16....	44	27	25	20	12	20	44	380	459	348	141	252
17....	42	27	*26	21	14	21	63	393	499	352	122	225
18....	53	27	21	20	14	22	68	351	518	348	105	176
19....	45	20	18	19	14	20	100	335	476	330	92	161
20....	40	24	19	17	15	20	92	343	592	294	89	144
21....	45	29	19	18	14	20	85	363	834	286	86	147
22....	45	27	20	18	14	20	83	351	1160	276	86	136
23....	45	26	22	17	14	18	94	319	974	252	89	124
24....	45	26	23	15	14	20	94	343	793	231	89	124
25....	45	22	24	14	14	22	152	367	740	225	141	119
26....	42	23	23	13	15	18	179	432	636	215	116	113
27....	39	22	23	12	16	16	190	552	660	222	113	108
28....	39	22	22	12	16	20	171	708	770	225	136	94
29....	38	22	21	14	....	18	190	960	782	218	138	92
30....	36	22	21	14	....	15	228	978	804	215	127	86
31....	36	....	21	13	....	13	....	746	....	202	130	....
Total	1427	816	702	540	374	593	2149	10641	21467	11095	4472	7714
Mean.	46.0	27.2	22.6	17.4	13.4	19.1	71.6	343	716	358	144	257
Max.	77	36	30	22	16	22	228	978	1160	710	205	894
Min.	36	20	17	12	12	13	14	108	437	202	86	86
Acre-ft.	2830	1620	1390	1070	742	1180	4260	21110	42580	22010	8870	15300

Total run-off for water year 1937-38=123,000 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Big Thompson River Below Power House Near Drake, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	109	60	24	12	7.8	17	22	95	592	673	201	107
2....	103	57	24	12	6.8	19	27	90	710	654	177	107
3....	100	32	22	11	6.8	20	30	88	735	569	164	110
4....	95	37	22	11	6.8	19	26	85	747	535	151	115
5....	93	68	30	10	7.0	20	25	93	611	508	137	107
6....	75	63	23	10	7.8	20	26	132	513	497	134	104
7....	72	63	24	10	11	25	27	151	445	519	127	106
8....	70	35	24	10	11	22	21	212	425	519	118	107
9....	80	49	37	10	15	28	24	273	440	455	112	96
10....	81	52	28	10	13	20	34	399	430	430	106	90
11....	77	50	29	10	15	24	42	367	513	430	102	86
12....	74	50	27	11	17	28	35	304	685	416	103	81
13....	74	48	25	12	17	24	41	297	552	530	106	77
14....	72	54	26	13	18	20	44	359	541	524	96	76
15....	72	46	30	12	16	22	64	513	558	455	95	72
16....	75	50	33	13	18	24	76	558	611	425	99	71
17....	75	47	33	13	16	24	80	586	692	382	151	76
18....	70	46	32	12	17	27	56	540	766	374	229	70
19....	66	40	36	12	17	29	75	599	760	340	184	64
20....	72	42	30	11	16	22	83	558	661	336	144	63
21....	77	47	24	10	18	20	82	492	710	240	130	61
22....	68	40	27	10	15	25	96	403	904	246	120	58
23....	63	34	26	8	17	30	106	524	868	232	109	63
24....	62	20	26	8	17	28	99	465	729	237	104	75
25....	66	29	27	9	17	26	89	508	735	220	118	71
26....	63	39	25	8	16	24	99	455	1080	209	117	68
27....	59	28	20	7	20	22	115	435	846	218	110	62
28....	63	22	22	7	13	24	113	563	698	237	110	59
29....	60	22	22	6.6	....	20	103	685	630	255	118	59
30....	62	22	20	8.0	....	20	95	698	599	229	125	55
31....	63	....	15	6.0	....	24	....	592	....	234	113	....
Total	2311	1292	813	313.2	393.0	717	1855	12125	19786	12128	4010	2416
Mean.	74.5	43.1	26.2	10.1	14.0	23.1	61.8	391	660	391	129	80.5
Max..	109	68	37	13	20	30	115	698	1080	673	229	115
Min..	59	20	15	6.0	6.8	17	21	85	425	209	95	55
Acre-ft.	4580	2560	1610	621	780	1420	3680	24050	39240	24060	7950	4790

Total run-off for water year 1936-37=115,300 acre-feet.

Discharge of Big Thompson River Below Power House Near Drake, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	93	55	21	28	19	28	22	340	898	942	206	180
2....	87	53	33	28	22	29	26	285	965	804	201	191
3....	78	50	48	28	20	30	25	279	995	720	201	1070
4....	74	50	42	28	22	32	32	259	1070	667	201	1170
5....	69	45	34	24	19	26	31	238	1070	635	186	935
6....	67	45	29	23	20	22	33	210	1170	569	174	687
7....	67	46	34	26	16	22	27	214	1020	491	160	654
8....	64	49	26	26	16	23	27	214	995	454	156	654
9....	65	43	20	22	22	28	28	203	882	449	160	534
10....	61	49	26	27	22	26	28	195	935	439	172	480
11....	60	46	59	25	22	20	32	195	868	444	176	860
12....	59	45	57	23	22	26	30	201	898	419	182	700
13....	59	33	42	26	20	31	34	212	965	376	191	680
14....	56	42	28	25	16	30	41	279	905	404	172	586
15....	55	43	26	26	18	29	68	368	694	478	174	502
16....	58	38	32	30	18	25	66	529	674	385	153	449
17....	58	45	32	30	18	29	82	546	707	385	137	404
18....	63	33	29	27	20	27	95	475	783	434	120	348
19....	62	18	20	26	18	25	137	429	674	372	105	311
20....	58	45	22	24	20	25	114	419	674	329	102	267
21....	58	63	22	25	18	25	114	429	1000	315	97	259
22....	63	53	28	25	20	28	113	424	1410	301	95	253
23....	60	39	29	25	20	25	121	400	1230	270	98	240
24....	62	51	30	22	20	23	126	395	1030	256	100	228
25....	63	40	32	19	20	29	140	439	980	245	137	226
26....	61	36	30	16	22	25	172	529	853	210	149	210
27....	58	28	29	15	22	20	195	667	853	245	134	191
28....	55	16	29	20	24	39	172	783	839	238	156	180
29....	56	32	31	20	....	31	195	980	1006	240	162	170
30....	51	37	31	20	....	25	233	1000	1020	226	164	162
31....	55	....	31	25	....	15	....	875	....	212	178	....
Total	1955	1268	982	754	556	818	2559	13011	28057	12984	4799	13781
Mean.	63.1	42.3	31.7	24.3	19.9	26.4	85.3	420	935	419	155	459
Max..	93	63	59	30	24	39	233	1000	1410	942	206	1170
Min..	51	16	20	15	16	15	22	195	674	212	95	162
Acre-ft.	3880	2520	1950	1500	1100	1620	5080	25810	55650	25750	9520	27330

Total run-off for water year 1937-38=161,700 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Big Thompson River at Canon Mouth for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	454	993	1020	215	474
2....	387	1090	825	210	454
3....	359	1130	738	212	2270
4....	332	1220	680	210	1640
5....	288	1220	647	198	1100
6....	250	1340	585	187	790
7....	232	1170	504	173	666
8....	215	1140	463	164	579
9....	200	986	454	178	477
10....	191	1050	444	205	550
11....	182	979	454	208	825
12....	189	1020	435	205	846
13....	203	1100	391	203	784
14....	260	1040	383	184	628
15....	344	797	498	187	504
16....	488	764	404	173	426
17....	Apr. 19	516	797	395	156	379
18....	to 30	482	874	435	140	325
19....	160	458	738	383	140	298
20....	161	473	797	347	130	278
21....	162	516	1110	325	124	263
22....	162	550	1680	311	118	252
23....	175	516	1420	278	122	238
24....	187	499	1130	263	126	232
25....	196	544	1090	255	180	215
26....	232	628	930	242	175	203
27....	276	784	895	250	150	194
28....	250	909	874	250	171	187
29....	268	1100	1080	250	184	178
30....	304	1140	1100	235	184	169
31....	972	....	222	182	....
Total	2533	14661	31554	13366	5394	16424
Mean	211	473	1052	431	174	547
Max.	304	1140	1680	1020	215	2270
Min.	160	182	738	222	118	169
Acre-ft.	5020	29080	62590	26510	10700	32580

Total run-off during period 166,480 acre-feet.

Discharge of Big Thompson River at Mouth Near La Salle, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	18	67	58	34	20	48	35	6.6	12	2.8	5.4	4.2
2....	14	65	61	33	20	48	33	6.9	11	2.4	5.4	4.2
3....	14	65	58	34	22	47	21	5.1	15	3.3	4.5	4.2
4....	29	62	57	34	24	46	3.9	5.4	47	3.0	5.7	5.4
5....	46	61	57	33	26	44	3.6	5.4	26	9.5	6.0	7.6
6....	47	60	57	31	28	44	2.9	5.4	10	7.5	6.3	14
7....	44	60	57	30	31	44	19	5.7	7.8	5.7	6.6	13
8....	44	57	57	34	34	44	46	6.3	7.2	12	6.6	11
9....	43	54	58	34	36	44	51	6.0	8.7	8.7	7.2	9
10....	47	54	58	33	*39	44	46	6.0	9.5	3.6	6.3	9
11....	52	53	58	33	39	44	41	22	12	2.8	5.4	8.7
12....	56	53	58	34	40	44	22	4.5	24	21	5.4	8.4
13....	58	55	58	35	41	44	4.5	3.6	20	38	4.5	8.1
14....	61	57	58	*37	42	41	4.5	3.3	10	34	4.2	7.8
15....	62	58	58	37	46	43	3.9	3.9	55	25	3.6	7.8
16....	63	56	59	37	44	44	3.9	6.0	25	34	3.6	6.9
17....	61	58	60	36	44	47	4.8	5.7	20	43	3.6	6.3
18....	54	61	60	36	46	46	5.1	5.4	24	49	3.6	6.0
19....	50	58	60	37	49	49	4.8	4.8	12	62	3.9	5.7
20....	51	57	57	38	48	54	3.6	3.0	13	49	4.2	6.6
21....	61	61	54	37	46	51	3.3	3.9	15	25	4.2	5.7
22....	58	62	53	35	44	46	3.3	4.2	20	7.8	4.2	5.7
23....	54	61	56	34	46	44	4.8	4.5	15	3.0	4.2	5.7
24....	56	62	57	34	47	43	6	11	7.8	2.7	4.2	6.0
25....	60	61	58	30	47	38	5.4	8.4	16	2.6	4.2	8.1
26....	66	59	57	29	49	38	4.8	26	117	2.7	4.2	6.9
27....	67	60	55	28	49	39	4.8	8.4	98	2.9	4.2	6.0
28....	67	61	54	27	49	38	6.6	7.5	9.5	3.0	4.2	5.7
29....	67	58	52	25	....	37	5.7	7.2	4.8	3.6	4.2	5.7
30....	66	57	50	23	....	36	5.4	18	4.2	4.2	4.2	5.4
31....	69	....	35	20	....	36	....	18	....	5.1	4.2	....
Total	1607	1773	1745	1012	1096	1355	409.6	238.1	676.5	478.9	148.2	331.8
Mean	51.8	59.1	56.3	32.6	39.1	43.7	13.7	7.68	22.6	15.4	4.78	11.1
Max.	69	67	61	38	49	54	51	26	117	62	7.2	7.6
Min.	14	53	35	20	20	36	2.9	3.0	4.2	2.4	3.6	4.2
Acre-ft.	3190	3520	3460	2010	2170	2690	812	472	1340	950	294	658

Total run-off for water year 1936-37=21,570 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Big Thompson River at Mouth Near La Salle, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.9	42	53	39	43	32	32	9.2	14	3.8	18	12
2....	5.9	45	53	38	42	32	32	8.8	14	2.9	16	275
3....	6.5	42	53	41	42	32	31	10	14	11	12	1440
4....	5.6	44	55	37	42	32	30	15	14	15	14	2610
5....	5.3	44	54	35	42	34	30	13	14	9.6	16	1860
6....	4.7	46	54	34	38	32	34	14	12	5.0	17	1000
7....	5.0	47	54	32	37	30	32	12	14	2.9	14	765
8....	5.0	46	53	36	37	30	35	11	21	2.6	14	590
9....	4.7	45	53	41	37	32	35	9.2	22	3.2	8.0	502
10....	4.7	44	55	40	37	30	36	6.2	24	3.2	11	423
11....	4.4	42	60	39	39	30	34	9.6	42	3.2	33	542
12....	5.0	37	62	37	41	33	32	9.6	44	3.2	18	398
13....	4.1	36	74	35	40	32	34	9.6	47	3.2	18	426
14....	3.8	40	68	37	40	31	34	10	44	19	18	292
15....	4.1	40	57	42	40	31	54	10	39	23	17	225
16....	6.8	40	51	42	40	29	33	10	30	20	16	199
17....	15	35	49	46	40	30	9.6	10	30	22	16	181
18....	24	38	49	47	42	27	6.8	10	28	23	17	148
19....	25	42	48	46	45	26	7.7	11	23	22	16	128
20....	26	46	42	44	42	25	8.0	11	45	19	17	122
21....	30	51	41	42	37	24	7.4	18	61	18	16	112
22....	35	54	42	43	37	26	7.1	18	46	35	13	108
23....	35	53	40	44	36	26	6.5	22	27	30	5.3	102
24....	34	57	41	42	35	26	6.5	17	16	29	5.3	92
25....	34	54	43	44	34	24	6.2	17	8.4	29	6.8	86
26....	34	53	43	40	30	25	4.1	14	14	28	12	84
27....	32	54	40	40	37	30	5.6	14	13	30	14	80
28....	31	56	39	42	30	33	12	14	10	28	12	78
29....	32	54	38	42	...	37	10	12	9.6	28	12	72
30....	32	54	39	41	...	34	10	12	7.1	27	12	67
31....	38	...	40	46	...	34	...	12	...	21	10	...
Total	538.5	1381	1543	1254	1082	929	655.5	379.2	747.1	519.8	444.4	13019
Mean.	17.4	46.0	49.8	40.5	38.6	30.0	21.8	12.2	24.9	16.8	14.3	434
Max..	38	57	74	47	45	37	54	22	61	35	33	2610
Min..	3.8	35	38	32	30	24	4.1	6.2	7.1	26	5.3	12
Acre-ft.	1070	2740	3060	2490	2150	1840	1300	752	1480	1030	881	25820

Total run-off for water year 1937-38=44,610 acre-feet.

Discharge of Cache La Poudre River at Mouth of Canon Near Ft. Collins, Colo., for Year Ending September 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	115	69	19	22	14	25	29	215	1520	951	443	406
2....	118	67	18	20	14	25	36	215	1820	848	430	406
3....	118	48	20	17	15	25	40	196	1810	648	395	430
4....	99	37	21	17	18	26	38	181	1750	578	372	430
5....	94	51	17	16	20	27	33	170	1390	803	350	424
6....	96	62	16	16	21	28	33	207	1240	884	350	449
7....	96	56	16	16	22	31	43	270	1250	875	366	600
8....	86	69	18	16	23	33	38	330	1260	848	265	521
9....	89	48	25	17	24	33	34	528	1270	758	181	401
10....	89	56	27	18	25	35	34	866	1230	803	164	215
11....	85	56	28	18	26	37	48	623	1060	922	184	153
12....	85	49	29	20	26	40	49	521	1270	639	170	131
13....	83	44	30	21	26	33	49	541	1060	714	188	115
14....	83	51	30	22	27	34	60	723	1270	821	257	104
15....	81	44	30	24	27	42	79	1100	1600	689	320	99
16....	81	44	30	22	27	40	96	1300	1530	500	389	99
17....	81	44	30	22	28	36	121	1530	1660	406	443	96
18....	81	44	30	20	28	33	84	1430	1600	412	541	94
19....	81	43	29	19	28	40	89	1640	1540	507	548	94
20....	86	37	28	18	27	27	104	1650	1310	570	514	86
21....	99	43	27	18	27	33	107	1410	1470	556	437	84
22....	94	40	27	17	28	37	115	1050	1350	494	320	79
23....	86	36	27	16	28	37	140	1330	1170	474	211	84
24....	79	22	27	16	28	42	121	1370	970	455	144	91
25....	79	20	25	15	26	28	110	1270	932	310	131	110
26....	81	38	30	14	26	27	118	1060	1480	261	137	107
27....	81	29	25	14	26	28	153	1020	1350	288	121	96
28....	84	29	22	14	26	30	167	1360	1060	283	140	89
29....	81	24	22	14	...	33	160	1580	884	320	252	86
30....	72	43	20	14	...	26	215	1510	857	265	406	84
31....	72	...	18	14	...	32	...	1350	...	274	430	...
Total	2735	1343	761	517	681	1003	2543	28546	39953	18156	9599	6263
Mean.	88.2	44.8	24.5	17.6	24.3	32.4	84.8	921	1332	586	310	209
Max..	118	69	30	24	28	42	215	1650	1820	951	548	600
Min..	72	20	16	14	14	25	29	170	857	261	121	79
Acre-ft.	5420	2660	1510	1080	1350	1990	5040	56620	79250	36010	19040	12420

Total run-off for water year 1936-37=222,400 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Cache La Poudre River at Mouth of Canon Near Ft. Collins, Colo., for Year
Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	97	83	74	38	27	31	34	595	3040	2080	432	572
2.....	125	83	70	35	29	30	38	610	2900	1730	451	696
3.....	130	72	66	35	29	30	40	602	3120	1530	478	1190
4.....	114	68	62	35	29	30	33	587	3040	1360	458	922
5.....	100	60	50	35	30	30	38	549	3070	1360	419	784
6.....	90	50	49	36	32	30	42	471	3160	1170	322	626
7.....	86	48	48	37	*34	24	40	426	3060	1150	308	549
8.....	88	68	46	36	34	28	31	400	3080	1050	352	587
9.....	90	54	48	35	34	34	34	363	2700	1050	384	527
10.....	90	58	51	33	33	30	40	322	2680	1040	426	478
11.....	90	64	57	*32	33	27	48	294	2700	1000	464	728
12.....	90	58	57	32	33	24	50	284	2530	958	464	610
13.....	90	48	56	32	33	36	52	322	2740	868	451	557
14.....	88	44	47	32	31	46	79	520	2400	825	413	513
15.....	83	56	49	34	30	46	150	809	1840	825	400	438
16.....	88	58	51	34	30	34	144	1000	1960	817	390	384
17.....	97	58	48	33	31	31	195	1440	1930	809	380	347
18.....	95	58	*47	33	32	38	230	1610	1970	809	370	332
19.....	93	54	44	32	32	36	337	1680	1900	793	360	294
20.....	90	70	41	32	32	30	245	1550	2060	728	345	238
21.....	88	90	40	31	31	40	234	1540	2380	657	332	219
22.....	100	72	42	31	31	48	230	1610	4420	618	308	208
23.....	95	64	45	29	31	30	242	1530	3120	445	337	201
24.....	97	70	45	24	31	28	262	1480	2180	358	363	208
25.....	104	68	44	25	32	40	266	1530	2130	339	389	198
26.....	107	50	43	26	34	48	289	1840	2180	471	413	191
27.....	104	28	43	27	36	50	358	2180	2100	478	332	198
28.....	102	30	43	28	35	76	337	2480	2030	471	499	172
29.....	100	46	42	27	....	79	332	2830	2000	451	649	169
30.....	95	68	41	26	....	72	379	2960	2240	419	549	166
31.....	88	....	41	27	....	48	....	2710	....	432	527	....
Total	2994	1798	1530	982	889	1204	4829	37064	76666	27141	12765	13302
Mean.	96.6	59.9	49.4	31.7	31.8	38.8	161	1196	2555	876	412	443
Max.	130	90	74	38	36	79	379	2900	4420	2080	649	1190
Min.	83	28	40	24	27	24	31	284	1840	358	308	166
Acre-ft.	5940	3570	3030	1950	1760	2390	9580	73520	152100	53830	25320	26380

Total run-off for water year 1937-38=359,400 acre-feet.

*Discharge measurement.

**Discharge of Cache La Poudre River Near Mouth Near Greeley, Colo., for Year Ending
Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	28	84	70	60	55	59	59	5.6	20	36	19	3.6
2.....	25	84	70	58	60	57	58	5.0	22	56	18	3.6
3.....	27	83	69	57	60	58	56	5.0	17	58	18	3.0
4.....	28	82	68	59	65	56	56	5.0	20	57	19	4.2
5.....	29	81	67	59	68	56	57	4.5	21	56	22	5.4
6.....	28	74	65	58	62	58	61	4.0	20	48	44	3.1
7.....	29	71	69	53	60	59	69	4.0	20	22	43	4.1
8.....	30	70	68	56	59	57	71	5.0	17	22	31	4.3
9.....	31	69	68	60	61	57	69	5.6	24	21	11	3.4
10.....	33	74	67	62	63	56	64	5.6	55	24	12	2.6
11.....	31	74	70	61	59	55	59	5.6	50	23	15	1.8
12.....	27	73	76	58	63	55	55	6.2	43	25	15	1.5
13.....	27	74	73	55	66	57	48	6.2	41	26	16	1.3
14.....	27	76	71	55	67	53	37	6.8	24	26	15	1.2
15.....	28	76	74	54	68	59	35	6.8	22	23	14	1.2
16.....	26	76	75	55	65	59	36	8.0	22	19	14	1.2
17.....	36	78	81	54	63	60	40	8.0	19	19	12	1.2
18.....	24	78	81	53	63	59	39	9.8	12	18	12	1.2
19.....	24	77	82	54	65	70	39	11	8.4	21	9.7	1.2
20.....	34	76	81	52	63	70	39	12	8.4	14	9.0	1.1
21.....	56	75	82	48	59	69	35	14	7.8	12	9.0	1.1
22.....	79	73	83	50	62	68	31	16	9.0	10	8.4	1.1
23.....	77	71	77	52	62	66	38	14	10	10	7.8	1.2
24.....	64	72	71	55	62	64	37	12	12	12	7.8	1.2
25.....	64	70	70	55	59	59	34	12	31	12	7.8	1.3
26.....	82	70	69	60	57	59	16	12	63	11	5.4	1.3
27.....	92	69	65	55	59	59	5.0	20	50	10	4.8	1.2
28.....	89	70	59	50	56	61	5.0	17	44	9.0	5.4	1.3
29.....	83	70	63	45	....	62	4.5	17	36	13	4.2	1.3
30.....	83	70	62	50	....	63	4.5	26	29	14	3.6	1.2
31.....	84	....	56	52	....	62	....	14	....	15	4.2	....
Total	1435	2240	2202	1705	1731	1862	1257.0	303.7	777.6	742.0	437.1	445.8
Mean.	46.3	74.7	71.0	55.0	61.8	60.1	41.9	9.80	25.9	23.9	14.1	14.9
Max.	92	84	83	62	68	70	71	26	63	58	44	43
Min.	24	69	56	45	55	53	4.5	4.0	7.8	9.0	3.6	3.0
Acre-ft.	2850	4440	4370	3380	3430	3690	2490	602	1540	1470	867	884

Total run-off for water year 1936-37=30,010 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cache La Poudre River Near Mouth Near Greeley, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	13	12	62	50	55	50	57	7.4	12	43	13	15
2....	13	12	61	51	55	51	53	7.4	12	40	14	16
3....	12	13	62	53	53	49	49	7.4	10	33	15	191
4....	11	13	63	52	56	48	44	8.6	12	23	14	717
5....	9.8	12	63	51	61	50	43	8.6	15	27	13	138
6....	9.2	14	61	50	58	49	42	8.0	25	26	13	71
7....	8.6	15	63	49	57	46	41	8.6	59	23	14	57
8....	9.2	16	63	52	57	47	40	7.4	146	25	13	44
9....	9.8	15	58	52	59	48	40	7.4	144	35	13	40
10....	9.2	14	60	53	57	46	39	8.0	60	53	13	38
11....	8.6	13	63	54	56	45	38	8.0	65	56	13	43
12....	9.2	29	61	50	56	45	37	8.6	52	53	13	70
13....	9.2	61	66	50	56	45	33	9.2	45	45	14	83
14....	13	58	70	51	56	45	32	9.8	55	25	14	61
15....	15	61	69	55	57	45	41	11	48	25	14	58
16....	13	64	62	54	51	44	46	12	42	24	15	56
17....	15	62	61	55	53	42	47	16	43	24	16	60
18....	18	64	62	57	51	41	46	37	41	25	16	54
19....	15	67	59	58	55	41	45	53	43	22	17	49
20....	12	66	55	56	59	41	35	25	46	20	28	42
21....	16	68	55	55	54	42	16	25	46	18	46	38
22....	13	70	53	55	54	43	9.2	45	45	18	44	37
23....	13	70	50	56	56	47	6.8	47	657	18	36	31
24....	11	69	48	52	52	44	5.6	34	255	18	16	27
25....	11	66	50	45	50	41	5.6	36	65	18	15	24
26....	12	67	49	58	49	48	5.6	30	61	16	15	23
27....	12	67	49	55	49	57	13	23	61	16	15	20
28....	11	65	53	54	49	58	9.8	11	60	14	16	20
29....	11	65	53	55	....	61	6.2	11	55	14	15	23
30....	15	64	52	45	....	61	6.8	9.2	49	15	15	24
31....	13	....	52	55	....	62	....	14	....	15	15	....
Total	370.8	1352	1808	1638	1531	1482	932.6	553.6	2329	827	543	2170
Mean.	12.0	45.1	58.3	52.8	54.7	47.8	31.1	17.9	77.6	26.7	17.5	72.3
Max..	18	70	70	58	61	62	57	53	657	56	46	717
Min..	8.6	12	48	45	49	41	5.6	7.4	10	14	13	15
Acre-ft.	735	2680	3590	3250	3040	2940	1850	1100	4620	1640	1080	4300

Total run-off for water year 1937-38=30,820 acre-feet.

Discharge of North Fork Republican River Near Wray, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	22	20	19	14	16	16
2....	22	20	21	16	16	16
3....	22	20	19	17	16	16
4....	23	21	18	17	16	19
5....	22	20	18	17	16	18
6....	23	19	18	17	16	18
7....	23	19	18	17	16	18
8....	24	18	18	17	16	18
9....	24	19	19	17	13	18
10....	24	20	19	16	15	18
11....	24	19	18	17	14	18
12....	23	19	17	70	14	18
13....	23	18	17	20	26	18
14....	23	18	17	17	16	18
15....	22	17	20	16	16	17
16....	22	16	19	16	15	17
17....	22	16	19	15	15	17
18....	22	16	19	15	15	18
19....	22	16	19	16	15	18
20....	17	16	18	12	15	18
21....	Mar. 23	15	17	18	12	13	18
22....	to 31	15	17	17	12	12	18
23....	23	15	17	16	12	12	18
24....	23	21	17	16	74	13	18
25....	23	20	17	16	24	15	18
26....	23	20	19	20	20	14	18
27....	23	20	19	17	18	13	18
28....	23	20	18	14	17	15	18
29....	22	20	18	13	17	15	18
30....	22	20	18	13	16	16	19
31....	22	....	19	....	16	16	....
Total	204	635	563	530	617	471	533
Mean.	22.7	21.2	18.2	17.7	19.9	15.2	17.8
Max..	23	24	21	21	74	26	19
Min..	22	15	16	13	12	12	16
Acre-ft.	405	1260	1120	1050	1220	934	1060

Total run-off for period=7,049 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Fork Republican River Near Wray, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	18	21	21	22	23	....	21	34	59	18	22	20
2....	18	21	21	22	23	....	21	25	55	18	23	21
3....	20	21	21	22	23	....	21	24	29	18	22	21
4....	20	21	21	22	22	....	6.9	23	27	17	22	21
5....	20	21	21	22	22	....	7.6	22	25	17	21	21
6....	19	21	21	22	22	....	7.1	22	25	18	21	21
7....	19	21	22	22	22	....	7.6	27	25	18	22	21
8....	19	21	22	22	22	....	7.1	25	25	18	23	20
9....	19	21	22	22	22	....	9.7	25	25	18	23	20
10....	15	21	22	22	22	....	26	23	24	17	22	20
11....	16	21	22	22	22	....	26	21	25	17	21	21
12....	19	21	22	22	22	....	26	20	24	17	20	20
13....	19	21	22	22	23	....	25	20	23	32	20	20
14....	20	21	23	22	23	....	28	20	22	175	20	19
15....	21	21	23	22	23	....	28	22	22	89	20	19
16....	21	21	23	22	23	....	27	22	22	63	21	19
17....	21	21	23	22	23	....	26	22	21	36	22	18
18....	21	21	23	22	23	....	26	20	21	23	20	18
19....	20	21	23	22	23	....	24	20	21	23	20	18
20....	20	21	23	22	23	....	24	20	21	22	20	17
21....	20	21	23	22	23	....	24	27	21	22	20	17
22....	20	21	23	22	23	....	24	27	20	22	20	17
23....	20	21	23	22	23	....	24	24	20	22	20	15
24....	20	21	22	22	23	....	40	23	20	22	20	16
25....	20	21	22	22	23	....	38	23	21	22	20	15
26....	20	21	22	22	23	....	36	22	21	22	20	15
27....	20	21	22	22	23	....	35	22	19	22	20	15
28....	20	21	22	22	23	....	34	22	19	59	21	15
29....	21	21	22	22	....	....	34	21	19	24	20	15
30....	21	21	22	23	....	....	34	59	19	22	20	15
31....	21	....	22	23	....	....	....	63	....	22	20	....
Total	608	630	686	684	635	713	718.0	790	740	955	646	550
Mean.	19.6	21.0	22.1	22.1	22.7	23.0	23.9	25.5	24.7	30.8	20.8	18.3
Max..	21	21	23	23	23	....	40	63	59	175	23	21
Min..	15	21	21	22	22	....	6.9	20	19	17	20	15
Acre-ft.	1210	1250	1360	1360	1260	1410	1420	1570	1470	1890	1280	1090

Total run-off for water year 1937-38=16,570 acre-feet.

Discharge of North Fork of Republican River at Colorado-Nebraska State Line for the Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	53	53	57	47	53	52	58	26	17	5.0	9	5.3
2....	44	42	57	48	57	57	58	20	66	5.7	8	5.7
3....	47	48	57	49	54	54	61	20	30	5.0	7	7.0
4....	50	48	57	50	55	54	63	20	34	8.2	6	23
5....	34	49	56	47	59	54	60	14	34	5.7	5.7	22
6....	37	46	54	45	52	54	60	12	44	5.7	5.3	13
7....	36	48	58	43	50	56	61	12	35	6.0	4.4	18
8....	37	48	60	42	57	51	61	24	26	5.0	3.7	22
9....	39	49	61	44	57	54	58	38	50	4.1	3.4	18
10....	41	49	61	47	*65	54	58	19	43	4.1	3.4	18
11....	49	47	58	53	59	56	57	18	36	3.7	3.4	26
12....	39	51	57	54	58	57	57	13	36	3.7	3.4	27
13....	39	63	56	55	54	58	54	23	36	14	12	24
14....	40	61	57	56	55	58	53	8.2	27	6.3	8.9	25
15....	40	60	54	57	58	58	50	7.4	32	5.7	7.4	24
16....	38	60	56	57	54	57	49	8.2	32	6.3	6.7	22
17....	37	61	56	58	52	51	48	6.3	30	18.0	6.3	23
18....	48	61	51	55	57	53	49	7.0	15	17.0	8.2	24
19....	35	61	51	53	54	57	43	9.6	10	8.5	8.2	31
20....	38	60	53	49	52	54	43	6.7	7.4	7.0	7.4	18
21....	43	58	54	45	47	54	43	6.3	4.4	7.0	9.3	18
22....	46	61	53	47	52	54	43	6.0	2.6	6.7	8.0	18
23....	46	61	51	49	53	54	46	6.3	2.6	8.2	7.5	18
24....	48	60	49	52	52	63	50	6.3	2.6	7.5	17	16
25....	60	63	50	53	48	73	50	9.3	3.1	21	7.0	18
26....	47	64	50	*55	50	69	49	23	15	13	6.7	36
27....	48	63	49	57	43	66	48	9.6	7.8	10	6.3	24
28....	41	61	49	54	48	63	38	7.0	6.3	10	5.7	22
29....	38	57	53	49	....	64	34	7.0	4.4	9.0	5.0	18
30....	35	57	50	52	....	64	34	8.9	4.1	12	5.0	20
31....	36	....	51	52	....	64	....	7.4	....	11	5.3	....
Total	1309	1670	1686	1574	1505	1787	1536	409.5	703.3	337.6	210.6	614.0
Mean.	42.2	55.7	54.4	50.8	53.8	57.6	51.2	13.2	23.4	10.9	6.79	20.5
Max..	60	64	61	58	65	73	63	38	66	75	17	37
Min..	34	42	49	42	43	51	34	6.0	2.6	3.7	3.4	5.3
Acre-ft.	2600	3310	3340	3120	2990	3540	3050	812	1390	670	418	1220

Total run-off for water year 1936-37=26,460 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Fork of Republican River at Colorado-Nebraska State Line for the Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	21	40	63	58	34	60	55	58	126	6.6	12	29
2.....	24	35	64	58	40	65	56	48	104	5.4	8.0	36
3.....	40	36	66	59	48	61	58	46	94	4.0	3.0	39
4.....	21	34	52	59	56	63	58	42	78	2.6	3.0	45
5.....	20	37	58	61	52	59	56	40	72	2.3	3.3	34
6.....	20	41	59	59	48	58	59	48	70	3.0	4.0	38
7.....	22	59	63	58	52	59	75	63	68	3.6	4.3	35
8.....	24	41	53	59	50	59	100	53	75	2.6	3.6	34
9.....	24	46	40	58	46	58	122	48	73	2.3	3.3	31
10.....	20	41	45	58	50	56	81	48	72	3.0	3.3	31
11.....	16	38	60	55	58	55	77	40	68	1.7	4.0	47
12.....	15	38	66	52	68	55	71	35	65	2.6	3.3	65
13.....	16	52	58	58	64	55	68	40	55	2.6	3.3	43
14.....	20	36	55	58	52	55	71	35	50	180	3.6	38
15.....	24	40	63	59	40	73	77	34	34	95	4.3	41
16.....	36	42	61	61	36	71	70	45	36	323	7.2	43
17.....	40	45	63	58	38	63	63	32	32	178	6.6	43
18.....	48	38	66	61	40	56	50	30	30	100	6.6	41
19.....	34	40	64	61	45	53	41	26	31	77	4.9	33
20.....	37	46	63	63	50	53	38	24	25	44	4.9	37
21.....	37	46	64	61	55	56	41	53	24	36	5.4	38
22.....	37	48	63	61	61	53	43	52	11	31	4.9	34
23.....	40	49	63	58	60	52	46	50	7.7	22	4.0	28
24.....	56	49	61	50	60	53	64	43	8.9	16	3.6	27
25.....	38	52	63	46	58	53	392	34	31	17	4.0	41
26.....	34	66	63	68	62	50	148	30	42	33	28	38
27.....	37	64	61	56	60	52	179	27	19	7.7	47	35
28.....	38	64	61	58	58	54	124	38	16	23	60	39
29.....	35	64	61	55	....	56	107	66	14	44	53	28
30.....	28	64	63	32	....	55	70	531	11	22	48	28
31.....	56	....	58	31	....	56	....	242	....	18	38	....
Total	968	1391	1863	1749	1441	1777	2560	2001	1442.6	1299.0	392.4	1112
Mean..	31.2	46.4	60.1	56.4	51.5	57.3	85.3	64.5	48.1	41.9	12.7	37.1
Max...	56	66	66	68	68	73	392	531	126	323	60	65
Min...	15	34	40	31	34	50	38	24	7.7	1.7	3.0	27
Acre-ft.	1920	2760	3700	3470	2860	3520	5080	3970	2860	2580	778	2210

Total run-off for water year 1937-38=35,710 acre-feet.

Discharge of Grizzly Creek Near Walden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	11	14	....	....	....	....	19	103	258	21	23	9.8
2.....	11	16	....	....	....	....	22	103	190	18	20	9.0
3.....	11	15	....	....	....	....	21	124	190	16	18	8.2
4.....	11	14	....	....	....	....	20	147	210	12	17	7.4
5.....	11	13	....	....	....	....	19	207	256	12	15	7.1
6.....	11	14	....	....	....	....	21	262	183	9.8	14	7.1
7.....	11	14	....	....	....	....	20	252	134	9.8	13	6.4
8.....	11	13	....	....	....	....	20	258	106	9.8	12	6.4
9.....	11	13	....	....	....	....	19	260	91	9.0	9.8	6.4
10.....	11	13	....	....	....	....	20	228	85	8.5	9.0	5.0
11.....	10	13	....	....	....	....	26	214	72	8.2	7.8	4.4
12.....	10	13	....	....	....	....	64	189	54	9.0	7.4	3.8
13.....	10	13	....	....	....	....	100	169	48	20	6.8	3.2
14.....	9.2	12	....	....	....	....	180	172	45	26	6.0	2.9
15.....	9.6	13	....	....	....	....	210	186	41	29	5.7	2.6
16.....	10	12	....	....	....	....	210	183	43	30	6.0	2.6
17.....	10	12	....	....	....	....	205	166	37	26	7.8	2.9
18.....	11	12	....	....	....	....	195	152	30	22	17	2.9
19.....	11	11	....	....	....	....	190	133	24	18	25	2.9
20.....	11	10	....	....	....	....	195	131	19	15	20	3.2
21.....	12	10	....	....	....	....	199	117	16	13	15	2.9
22.....	12	10	....	....	....	....	210	104	14	10	13	2.3
23.....	13	10	....	....	....	....	205	100	18	8.5	9.8	3.5
24.....	14	10	....	....	....	....	200	111	18	15	9.0	3.2
25.....	12	11	....	....	....	....	190	91	17	13	8.2	2.3
26.....	12	11	....	....	....	....	195	95	25	11	8.5	1.6
27.....	11	11	....	....	....	....	198	97	24	12	8.5	2.9
28.....	12	10	....	....	....	....	140	86	22	14	7.1	4.4
29.....	12	10	....	....	....	....	122	96	21	18	7.4	4.7
30.....	12	10	....	....	....	....	116	147	20	21	9.0	4.7
31.....	13	....	....	....	....	....	....	254	....	22	8.5	....
Total	346.8	363	....	....	....	....	3551	4937	2311	487.6	364.3	136.7
Mean..	11.2	12.1	....	....	....	....	118	159	77.0	15.7	11.8	4.56
Max...	14	16	....	....	....	....	210	262	258	30	25	9.8
Min...	9.2	10	....	....	....	....	19	86	14	8.2	5.7	1.6
Acre-ft.	688	720	....	....	....	....	7040	9790	4580	967	723	271

Total run-off for period=24,779 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Grizzly Creek Near Walden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.8	8.6	....	....	....	....	....	524	294	51	17	29
2....	5.5	8.6	....	....	....	....	....	616	294	50	14	41
3....	6.5	8.6	....	....	....	....	....	386	284	41	13	92
4....	6.5	9.0	....	....	....	....	....	322	326	33	19	89
5....	5.5	11	....	....	....	....	....	234	310	21	17	49
6....	5.8	12	....	....	....	....	....	181	308	16	16	32
7....	5.8	9.8	....	....	....	....	....	140	335	14	15	25
8....	7.2	11	....	....	....	....	....	119	359	15	14	29
9....	7.2	16	....	....	....	....	....	109	318	15	14	24
10....	7.9	15	....	....	....	....	Apr. 12	151	290	14	14	21
11....	7.5	13	....	....	....	....	to 30	180	275	14	18	22
12....	5.5	13	....	....	....	....	*64	208	255	16	18	26
13....	5.1	14	....	....	....	....	75	273	226	17	17	42
14....	4.8	17	....	....	....	....	100	316	210	17	16	48
15....	5.1	13	....	....	....	....	180	379	192	20	15	31
16....	5.5	14	....	....	....	....	*335	433	175	24	16	23
17....	7.5	17	....	....	....	....	580	484	130	24	15	22
18....	9.4	12	....	....	....	....	616	460	120	21	14	23
19....	11	12	....	....	....	....	701	402	115	20	11	22
20....	15	11	....	....	....	....	395	357	102	21	9.8	22
21....	13	13	....	....	....	....	322	296	99	22	8.6	21
22....	10	14	....	....	....	....	364	262	115	22	7.5	19
23....	10	*16	....	....	....	....	414	275	148	21	6.8	19
24....	10	14	....	....	....	....	419	232	144	21	6.8	19
25....	9.4	13	....	....	....	....	436	219	116	18	7.5	18
26....	9.0	13	....	....	....	....	500	237	102	15	13	18
27....	9.0	12	....	....	....	....	527	257	80	14	9.8	17
28....	9.0	12	....	....	....	....	445	279	50	14	10	18
29....	9.0	12	....	....	....	....	440	280	50	17	9.8	18
30....	8.6	12	....	....	....	....	498	326	46	22	25	17
31....	8.6	....	....	....	....	....	....	326	....	20	24	....
Total	245.7	376.6	....	....	....	....	7411	9263	5868	670	431.6	896
Mean..	7.93	12.6	....	....	....	....	390	299	196	21.6	13.9	29.9
Max...	15	17	....	....	....	....	701	616	359	51	25	92
Min...	4.8	8.6	....	....	....	....	64	109	46	14	6.8	17
Acre-ft.	487	747	....	....	....	....	14700	18370	11640	1330	856	1780

Total run-off for period=49,910 acre-feet.

*Discharge measurement.

Discharge of Little Grizzly Creek Near Hebron, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.6	15	....	....	....	....	24	97	353	49	28	5.6
2....	5.6	14	....	....	....	....	25	81	233	43	25	5.0
3....	5.6	14	....	....	....	....	25	105	286	39	24	4.6
4....	5.6	14	....	....	....	....	24	214	312	39	24	4.6
5....	8.0	14	....	....	....	....	24	266	320	33	18	4.6
6....	9.2	14	....	....	....	....	25	277	220	21	17	4.6
7....	9.2	13	....	....	....	....	25	297	140	24	14	5.6
8....	8.6	14	....	....	....	....	25	305	94	24	12	5.6
9....	10	16	....	....	....	....	24	305	87	32	11	5.0
10....	12	17	....	....	....	....	24	294	92	52	8.0	4.1
11....	12	17	....	....	....	....	24	299	86	38	7.4	3.6
12....	12	17	....	....	....	....	26	242	137	68	6.2	3.6
13....	12	17	....	....	....	....	34	212	143	67	6.2	3.2
14....	14	17	....	....	....	....	54	214	135	75	5.6	2.8
15....	14	18	....	....	....	....	74	216	157	50	5.0	2.8
16....	14	19	....	....	....	....	80	220	171	43	4.6	2.3
17....	14	17	....	....	....	....	86	250	202	30	8.0	2.3
18....	15	13	....	....	....	....	94	310	196	28	14	2.8
19....	18	12	....	....	....	....	105	320	186	48	14	2.8
20....	22	14	....	....	....	....	115	280	166	35	12	3.2
21....	25	13	....	....	....	....	113	220	177	29	8.0	2.8
22....	20	13	....	....	....	....	130	194	188	25	5.6	2.3
23....	25	13	....	....	....	....	105	224	170	25	6.2	2.8
24....	16	13	....	....	....	....	113	290	120	21	5.0	4.6
25....	16	13	....	....	....	....	113	305	97	28	5.0	1.0
26....	16	13	....	....	....	....	122	275	175	34	5.6	9.2
27....	14	12	....	....	....	....	120	198	135	38	6.2	7.4
28....	16	12	....	....	....	....	111	231	68	34	4.1	6.2
29....	16	12	....	....	....	....	94	286	53	46	4.6	5.6
30....	16	12	....	....	....	....	80	372	45	36	4.6	5.0
31....	16	....	....	....	....	....	....	408	....	29	6.2	....
Total	422.4	432	....	....	....	....	2038	7807	4944	1183	325.1	134.6
Mean..	13.6	14.4	....	....	....	....	67.9	252	165	38.2	10.5	4.49
Max...	25	19	....	....	....	....	130	408	353	75	28	10
Min...	5.6	12	....	....	....	....	24	81	45	21	4.1	2.3
Acre-ft.	838	857	....	....	....	....	4040	15480	9810	2350	645	267

Total run-off for period=34,287 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Little Grizzly Creek Near Hebron, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.6	5.0	....	....	....	....	....	387	293	141	16	22
2....	5.6	5.0	....	....	....	....	....	365	291	97	15	37
3....	5.6	7.4	....	....	....	....	....	286	310	71	15	95
4....	5.0	6.8	....	....	....	....	....	222	359	55	15	70
5....	0.5	5.0	....	....	....	....	....	161	365	45	14	35
6....	0.4	5.0	....	....	....	....	....	138	374	36	11	25
7....	0.5	7.4	....	....	....	....	....	121	428	32	11	21
8....	1.4	17	....	....	....	....	....	129	442	25	10	19
9....	2.8	20	....	....	....	....	....	110	372	18	10	15
10....	1.9	20	....	....	....	....	....	124	370	17	12	15
11....	1.4	20	....	....	....	....	....	132	350	30	16	21
12....	1.0	19	....	....	....	....	....	132	299	30	13	25
13....	0.5	18	....	....	....	....	....	165	284	24	11	40
14....	1.4	19	....	....	....	....	Apr. 16	211	272	22	11	38
15....	1.4	20	....	....	....	....	to 30	262	204	24	11	29
16....	2.3	18	....	....	....	....	*146	328	234	24	12	23
17....	4.6	16	....	....	....	....	190	396	258	29	12	20
18....	4.6	14	....	....	....	....	300	352	262	31	11	20
19....	5.6	13	....	....	....	....	340	286	199	45	8.5	18
20....	7.4	13	....	....	....	....	240	225	184	46	7.4	17
21....	8.6	15	....	....	....	....	260	177	197	44	6.2	16
22....	7.4	16	....	....	....	....	315	165	328	42	5.4	15
23....	6.8	*17	....	....	....	....	326	150	315	42	4.1	15
24....	6.2	15	....	....	....	....	297	134	247	36	3.7	14
25....	6.8	13	....	....	....	....	317	127	200	31	4.5	14
26....	8.0	13	....	....	....	....	359	163	150	32	5.4	13
27....	8.0	13	....	....	....	....	306	225	136	31	10	12
28....	7.4	13	....	....	....	....	260	268	116	29	25	13
29....	6.2	13	....	....	....	....	313	324	124	24	23	14
30....	6.2	13	....	....	....	....	330	370	148	20	20	13
31....	5.6	....	....	....	....	....	....	324	....	18	20	....
Total	136.6	409.6	....	....	....	....	4299	6959	8111	1191	369.2	744
Mean.	4.41	13.7	....	....	....	....	287	224	270	38.4	11.9	24.8
Max..	8.6	20	....	....	....	....	359	396	442	141	25	95
Min..	0.4	5.0	....	....	....	....	146	110	116	17	3.7	12
Acre-ft.	271	812	....	....	....	....	8530	13800	16090	2360	732	1480

Total run-off for period=44,075 acre-feet.

*Discharge measurement.

Discharge of Roaring Fork Near Walden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	27	26	....	....	....	....	28	79	196	148	49	20
2....	25	25	....	....	....	....	29	77	142	116	48	20
3....	28	19	....	....	....	....	30	80	235	82	53	19
4....	26	19	....	....	....	....	29	80	374	66	44	20
5....	25	19	....	....	....	....	29	96	224	62	41	18
6....	26	20	....	....	....	....	30	111	133	55	38	18
7....	26	21	....	....	....	....	30	118	88	62	35	16
8....	25	20	....	....	....	....	29	121	62	85	34	15
9....	25	21	....	....	....	....	29	139	50	85	32	18
10....	25	21	....	....	....	....	28	139	60	119	32	18
11....	20	20	....	....	....	....	28	142	56	99	30	17
12....	18	18	....	....	....	....	28	116	99	112	29	18
13....	17	21	....	....	....	....	28	93	114	146	27	18
14....	17	21	....	....	....	....	28	96	118	146	25	18
15....	17	18	....	....	....	....	28	130	137	93	25	19
16....	21	17	....	....	....	....	30	160	184	71	27	19
17....	25	18	....	....	....	....	38	162	264	66	37	20
18....	18	17	....	....	....	....	49	218	306	69	50	18
19....	17	17	....	....	....	....	68	224	282	57	39	18
20....	24	17	....	....	....	....	90	196	252	55	32	18
21....	27	18	....	....	....	....	96	155	298	49	29	17
22....	25	16	....	....	....	....	94	131	365	49	26	18
23....	25	15	....	....	....	....	88	166	338	48	25	21
24....	26	16	....	....	....	....	92	178	240	52	24	33
25....	25	15	....	....	....	....	94	182	227	62	29	27
26....	25	15	....	....	....	....	96	151	269	60	25	25
27....	25	15	....	....	....	....	103	135	157	57	25	25
28....	25	15	....	....	....	....	87	175	111	56	23	24
29....	21	14	....	....	....	....	85	222	83	59	24	23
30....	21	14	....	....	....	....	80	332	88	52	23	23
31....	25	....	....	....	....	....	....	233	....	53	21	....
Total	722	548	....	....	....	....	1621	4637	5554	2391	1001	601
Mean.	23.3	18.3	....	....	....	....	54.0	150	185	77.1	32.3	20.0
Max..	28	26	....	....	....	....	103	332	374	148	53	33
Min..	17	14	....	....	....	....	28	77	52	48	21	15
Acre-ft.	1430	1090	....	....	....	....	3220	9200	11020	4740	1990	1190

Total run-off for period=33,880 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roaring Fork Near Walden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	23	24	....	....	....	....	....	246	226	278	56	44
2....	22	23	....	....	....	....	....	188	254	204	47	54
3....	21	22	....	....	....	....	....	158	285	145	50	135
4....	20	21	....	....	....	....	....	127	347	112	49	133
5....	19	18	....	....	....	....	....	112	364	92	44	98
6....	19	18	....	....	....	....	....	92	435	75	44	86
7....	21	29	....	....	....	....	....	78	435	60	42	80
8....	29	27	....	....	....	....	....	70	406	53	40	72
9....	27	24	....	....	....	....	....	60	388	41	41	60
10....	21	25	....	....	....	....	....	50	424	36	44	57
11....	19	20	....	....	....	....	Apr. 13	50	384	34	42	56
12....	18	25	....	....	....	....	to 30	54	355	39	38	60
13....	17	21	....	....	....	....	47	62	366	40	36	70
14....	17	22	....	....	....	....	75	86	318	47	36	70
15....	20	22	....	....	....	....	96	108	226	54	35	64
16....	20	21	....	....	....	....	117	252	244	57	34	56
17....	19	20	....	....	....	....	192	208	307	60	30	50
18....	38	19	....	....	....	....	329	156	331	64	27	41
19....	31	18	....	....	....	....	331	127	258	60	22	40
20....	27	16	....	....	....	....	198	100	278	63	20	38
21....	26	18	....	....	....	....	252	78	333	62	21	36
22....	25	19	....	....	....	....	270	64	469	54	20	36
23....	24	20	....	....	....	....	270	46	440	53	20	35
24....	24	17	....	....	....	....	218	45	377	47	22	34
25....	24	16	....	....	....	....	208	49	300	47	30	34
26....	24	15	....	....	....	....	204	66	262	56	40	31
27....	24	15	....	....	....	....	156	127	260	60	41	30
28....	22	15	....	....	....	....	140	198	260	59	44	30
29....	21	15	....	....	....	....	161	289	292	63	44	30
30....	22	15	....	....	....	....	188	294	322	70	39	30
31....	22	....	....	....	....	....	....	248	....	64	42	....
Total	706	600	....	....	....	....	3452	3888	9946	2249	1140	1690
Mean.	22.8	20.0	....	....	....	....	192	125	332	72.5	36.8	56.3
Max..	38	29	....	....	....	....	331	294	469	278	56	135
Min..	17	15	....	....	....	....	47	45	226	34	20	30
Acre-ft.	1400	1190	....	....	....	....	6850	7710	19730	4460	2260	3350

Total run-off for period=46,950 acre-feet.

Discharge of North Platte River Near Walden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	53	63	....	....	....	....	138	252	975	266	111	36
2....	52	65	....	....	....	....	142	234	702	239	110	36
3....	51	60	....	....	....	....	140	289	810	177	108	35
4....	51	58	....	....	....	....	140	327	1010	144	98	34
5....	47	56	....	....	....	....	140	462	1120	126	86	32
6....	50	62	....	....	....	....	140	600	669	105	78	29
7....	51	65	....	....	....	....	142	664	466	116	70	27
8....	51	60	....	....	....	....	150	669	349	140	64	26
9....	52	62	....	....	....	....	158	745	300	150	59	28
10....	51	62	....	....	....	....	164	755	300	218	56	28
11....	50	60	....	....	....	....	168	721	272	187	51	27
12....	46	56	....	....	....	....	185	632	324	223	46	26
13....	42	57	....	....	....	....	240	522	382	261	42	25
14....	41	52	....	....	....	....	330	514	365	300	39	24
15....	41	56	....	....	....	....	410	591	407	228	38	25
16....	45	56	....	....	....	....	470	466	466	187	38	24
17....	50	52	....	....	....	....	480	697	587	161	52	25
18....	45	56	....	....	....	....	500	765	632	155	76	24
19....	44	53	....	....	....	....	490	750	596	144	82	24
20....	52	51	....	....	....	....	510	692	543	128	77	24
21....	63	49	....	....	....	....	540	578	578	112	64	23
22....	67	49	....	....	....	....	560	490	632	102	53	23
23....	67	48	....	....	....	....	530	514	600	94	46	25
24....	63	46	....	....	....	....	510	609	458	102	42	38
25....	62	43	....	....	....	....	500	651	389	120	48	35
26....	60	44	....	....	....	....	520	587	574	122	41	37
27....	60	43	....	....	....	....	530	506	438	114	41	32
28....	62	42	....	....	....	....	450	552	300	112	38	31
29....	56	42	....	....	....	....	340	660	221	122	38	33
30....	58	42	....	....	....	....	264	890	204	120	37	32
31....	60	....	....	....	....	....	....	1050	....	112	37	....
Total	1643	1610	....	....	....	....	9981	18434	15669	4887	1866	868
Mean.	53.0	53.7	....	....	....	....	333	595	522	158	60.2	28.9
Max..	67	65	....	....	....	....	560	1050	1120	300	111	38
Min..	41	42	....	....	....	....	138	234	204	94	37	23
Acre-ft.	3260	3190	....	....	....	....	19800	36560	31080	9690	3700	1720

Total run-off for period=109,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Platte River Near Walden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	53	....	....	....	....	....	1160	980	565	82	100
2....	32	53	....	....	....	....	....	1260	924	444	77	119
3....	30	51	....	....	....	....	....	951	942	324	78	277
4....	32	51	....	....	....	....	....	780	1050	248	80	302
5....	30	48	....	....	....	....	....	591	1140	198	78	194
6....	30	48	....	....	....	....	....	485	1160	164	74	148
7....	33	64	....	....	....	....	....	372	1290	138	71	131
8....	43	63	....	....	....	....	....	318	1340	126	67	124
9....	48	64	....	....	....	....	....	283	1240	108	66	106
10....	43	63	....	....	....	....	....	295	1200	89	73	98
11....	39	64	....	....	....	....	Apr. 13	362	1140	90	76	90
12....	36	58	....	....	....	....	to 30	394	1030	94	74	106
13....	33	54	....	....	....	....	220	506	975	86	67	133
14....	31	60	....	....	....	....	575	640	928	84	66	148
15....	34	63	....	....	....	....	870	794	771	88	63	122
16....	37	53	....	....	....	....	758	1050	717	83	64	103
17....	39	48	....	....	....	....	975	1160	771	90	60	94
18....	63	45	....	....	....	....	1390	1050	816	92	53	88
19....	82	42	....	....	....	....	1800	906	708	114	43	80
20....	71	40	....	....	....	....	1080	780	676	124	37	76
21....	64	48	....	....	....	....	995	636	726	122	33	71
22....	59	50	....	....	....	....	1080	531	951	113	31	69
23....	55	54	....	....	....	....	1140	514	1020	111	29	66
24....	54	45	....	....	....	....	1040	436	888	100	30	66
25....	54	42	....	....	....	....	1040	421	762	95	38	63
26....	55	42	....	....	....	....	1120	480	627	92	51	59
27....	54	40	....	....	....	....	1110	614	578	95	58	59
28....	53	40	....	....	....	....	951	794	535	95	67	58
29....	51	40	....	....	....	....	946	933	548	95	69	56
30....	50	40	....	....	....	....	1050	1070	604	102	67	56
31....	50	....	....	....	....	....	....	1080	....	94	113	....
Total	1417	1526	....	....	....	....	18140	21646	27037	4463	1935	3262
Mean..	45.7	50.9	....	....	....	....	1008	698	901	144	62.4	109
Max..	82	64	....	....	....	....	1800	1260	1340	565	113	302
Min..	30	40	....	....	....	....	220	283	535	83	29	56
Acre-ft.	2810	3030	....	....	....	....	35980	42930	53630	8850	3840	6470

Total run-off for period=157,540 acre-feet.

Discharge of North Platte River Near Northgate, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	121	179	68	50	44	80	205	474	1610	536	295	105
2....	116	166	68	44	46	85	215	430	1260	588	286	100
3....	112	165	58	40	48	95	210	424	1340	455	286	96
4....	112	160	54	38	50	90	210	443	1730	370	267	96
5....	114	193	52	40	52	85	215	572	2360	342	234	98
6....	123	195	52	40	52	95	215	816	1680	315	211	96
7....	126	190	54	38	48	105	220	965	1150	320	200	93
8....	123	179	58	36	46	110	225	987	826	331	186	93
9....	121	186	62	32	48	120	240	1110	642	353	172	91
10....	118	189	58	34	50	135	250	1130	610	474	160	89
11....	118	176	56	36	54	160	260	1060	536	455	147	89
12....	114	182	60	34	56	175	270	976	443	480	136	82
13....	112	182	64	33	56	170	350	776	522	550	126	78
14....	109	176	66	38	56	160	480	702	522	900	118	74
15....	107	169	68	40	56	165	700	720	565	1080	112	68
16....	109	182	70	40	54	170	760	847	610	805	107	63
17....	118	176	64	38	56	175	750	889	684	565	114	61
18....	126	196	60	34	58	180	760	910	767	572	150	59
19....	118	153	54	30	60	170	770	932	796	522	179	59
20....	128	156	60	30	64	180	777	965	758	449	172	55
21....	163	156	65	38	68	190	800	805	767	376	160	53
22....	179	160	70	40	68	195	780	676	910	326	139	53
23....	176	136	75	42	70	200	760	668	943	290	123	61
24....	163	115	78	42	75	190	740	805	858	276	114	65
25....	160	90	80	44	75	185	730	910	693	304	114	96
26....	163	100	78	46	75	180	720	987	998	336	116	89
27....	163	110	72	46	75	190	738	776	932	315	109	85
28....	163	95	64	44	80	200	748	738	710	358	105	78
29....	160	75	52	42	....	210	684	889	543	331	107	78
30....	156	65	50	42	....	210	558	1200	501	320	112	78
31....	163	....	48	42	....	205	....	1540	....	299	112	....
Total	4154	4652	1938	1213	1640	4860	15340	26122	27266	13993	4969	2381
Mean..	134	155	62.5	39.1	58.6	157	511	843	909	451	160	79.4
Max..	179	196	80	50	80	210	800	1540	2360	1080	295	105
Min..	107	65	48	30	44	80	205	424	443	276	105	53
Acre-ft.	8240	9230	3840	2410	3250	9640	30430	51810	54080	27750	9860	4720

Total run-off for water year 1936-37=215,300 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Platte River Near Northgate Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	80	138	110	80	92	98	135	2210	2360	1420	262	301
2....	82	141	105	82	94	110	135	2480	2270	1320	246	297
3....	85	141	105	82	94	125	130	2210	2240	1050	242	407
4....	85	138	105	*79	92	125	135	1820	2320	821	254	588
5....	85	126	105	77	94	120	140	1460	2500	647	234	498
6....	85	116	100	75	92	125	145	1240	2620	540	219	385
7....	91	120	96	74	90	125	145	953	3020	447	212	334
8....	98	120	92	74	88	130	150	790	3240	418	208	324
9....	118	120	92	76	88	130	160	656	3290	390	212	292
10....	123	120	93	78	88	125	190	588	3140	348	226	270
11....	130	125	96	78	88	125	240	620	2910	320	250	266
12....	130	130	100	76	90	125	350	656	2460	320	246	315
13....	130	125	100	75	90	125	550	683	2240	315	234	374
14....	130	120	97	78	92	125	720	780	2140	320	215	407
15....	125	125	95	84	94	125	1130	1050	2010	385	212	363
16....	125	125	90	84	94	120	1450	1760	1830	424	215	310
17....	123	125	86	84	94	125	2180	2170	1700	429	212	266
18....	138	120	84	84	94	125	2640	2050	1620	441	187	246
19....	190	115	83	84	92	130	3850	1870	1590	429	159	230
20....	190	110	82	84	90	130	3680	1750	1450	385	135	208
21....	173	125	85	83	90	130	2340	1720	1500	385	123	197
22....	163	130	87	83	88	130	2420	1590	1750	363	118	187
23....	156	125	88	84	88	130	2670	1420	2280	334	116	180
24....	153	*122	86	84	90	135	2670	1300	2450	315	129	176
25....	153	120	82	88	92	135	2530	1180	2240	297	194	173
26....	153	120	86	88	90	130	2670	1140	1790	288	163	173
27....	150	110	86	88	88	130	2690	1280	1620	297	204	166
28....	144	110	87	88	90	130	2270	1580	1600	315	226	159
29....	141	110	84	89	....	125	1980	1830	1390	292	238	156
30....	135	110	80	90	....	130	2100	2180	1360	288	230	153
31....	135	....	78	90	....	130	....	2380	....	284	234	....
Total	3999	3682	2845	2543	2546	3903	42595	45396	64930	14627	6355	8401
Mean.	129	123	91.8	82.0	90.9	126	1420	1464	2164	472	205	280
Max.	190	141	110	90	94	135	3850	2480	3290	1420	262	588
Min.	80	116	78	74	88	98	130	588	1360	284	116	153
Acre-ft.	7930	7300	5640	5040	5050	7740	84490	90040	128800	29010	12600	16660

Total run-off for water year 1937-38=400,300 acre-feet.

*Discharge measurement.

Discharge of Willow Creek Near Rand, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.0	6.0	....	....	....	....	....	4.6	51	9.7	6.3	2.1
2....	1.7	6.6	....	....	....	....	....	4.1	38	8.0	5.5	2.3
3....	1.8	6.9	....	....	....	....	....	3.6	76	6.0	5.2	3.0
4....	1.8	7.6	....	....	....	....	....	3.6	80	4.1	4.6	3.4
5....	1.7	7.6	....	....	....	....	....	3.4	69	4.1	5.8	3.0
6....	2.0	....	....	....	....	....	....	2.3	39	4.4	6.3	3.0
7....	2.0	....	....	....	....	....	....	4.1	23	4.9	6.6	2.8
8....	1.8	....	....	....	....	....	....	2.1	19	6.0	6.0	3.4
9....	1.6	....	....	....	....	....	....	1.6	16	5.8	5.8	2.1
10....	1.7	....	....	....	....	....	....	1.1	15	6.3	5.2	1.6
11....	1.6	....	....	....	....	....	....	1.7	9.7	7.3	4.4	1.5
12....	1.4	....	....	....	....	....	....	1.7	8.3	14	4.1	.9
13....	1.4	....	....	....	....	....	....	1.9	9.3	35	4.1	.7
14....	1.8	....	....	....	....	....	....	2.3	12	23	3.8	.6
15....	1.4	....	....	....	....	....	....	2.8	18	12	3.8	.9
16....	1.4	....	....	....	....	....	....	3.4	13	8.3	3.8	.7
17....	1.4	....	....	....	....	....	....	3.8	12	4.4	4.4	.9
18....	1.3	....	....	....	....	....	....	3.8	7.6	4.9	11	.4
19....	1.3	....	....	....	....	....	....	4.1	6.9	23	9.7	.4
20....	1.7	....	....	....	....	....	Apr. 22	3.6	5.8	1.1	6.3	.4
21....	2.1	....	....	....	....	....	to 30	3.6	5.2	.6	4.6	.4
22....	1.8	....	....	....	....	....	16	4.6	6.6	1.0	3.8	.4
23....	1.6	....	....	....	....	....	16	4.1	4.1	3.6	3.4	.6
24....	1.4	....	....	....	....	....	18	6.0	4.1	3.8	3.8	2.1
25....	2.3	....	....	....	....	....	15	8.3	6.3	5.2	3.8	2.8
26....	2.7	....	....	....	....	....	16	18	26	4.9	3.8	1.9
27....	6.0	....	....	....	....	....	20	12	14	5.5	3.6	1.6
28....	5.1	....	....	....	....	....	9.0	14	8.0	5.5	3.6	1.1
29....	6.3	....	....	....	....	....	8.3	26	6.0	6.0	4.4	.9
30....	6.9	Nov. 1	....	....	....	....	5.2	55	5.5	8.0	5.5	1.0
31....	6.9	to 5	....	....	....	....	....	56	....	8.3	3.8	....
Total	75.9	34.7	....	....	....	....	123.5	267.2	614.4	224.0	156.8	46.9
Mean.	2.45	6.94	....	....	....	....	13.7	8.62	20.5	7.23	5.06	1.56
Max.	6.9	7.6	....	....	....	....	20	56	80	35	11	3.4
Min.	1.3	6.0	....	....	....	....	5.2	1.1	4.1	.6	3.4	.4
Acre-ft.	151	69	....	....	....	....	245	530	1220	444	311	93

Total run-off for period=3,063 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Willow Creek Near Rand, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.9	3.0	....	....	....	....	....	62	124	32	5.5	7.2
2....	2.5	3.0	....	....	....	....	....	46	122	23	4.8	11
3....	1.9	3.0	....	....	....	....	....	41	136	18	5.3	28
4....	1.6	2.8	....	....	....	....	....	37	136	16	5.3	19
5....	1.6	2.3	....	....	....	....	....	39	132	13	5.3	13
6....	1.7	2.8	....	....	....	....	....	30	144	13	5.5	9.0
7....	1.3	3.0	....	....	....	....	....	26	160	12	5.3	11
8....	1.9	3.8	....	....	....	....	....	23	160	9.8	5.3	11
9....	2.3	3.9	....	....	....	....	....	25	136	8.7	5.8	10
10....	1.9	3.8	....	....	....	....	....	23	131	8.4	7.2	9.0
11....	1.9	3.8	....	....	....	....	....	22	112	7.8	7.2	8.7
12....	2.1	3.4	....	....	....	....	....	20	100	7.8	6.6	11
13....	2.1	3.0	....	....	....	....	....	22	111	7.5	6.3	16
14....	1.9	3.4	....	....	....	....	....	22	114	9.8	6.0	11
15....	2.3	3.7	....	....	....	....	....	35	90	19	6.3	8.4
16....	4.1	2.8	....	....	....	....	....	71	79	20	6.0	7.5
17....	4.1	2.2	....	....	....	....	....	81	62	14	5.5	6.6
18....	4.6	2.0	....	....	....	....	....	92	57	14	5.3	6.0
19....	4.4	1.8	....	....	....	....	....	86	56	15	4.1	6.0
20....	3.8	1.7	....	....	....	....	....	82	52	12	3.6	5.8
21....	3.8	2.1	....	....	....	....	....	70	51	11	3.4	5.5
22....	4.4	2.2	....	....	....	....	Apr. 24	65	59	9.8	3.2	6.0
23....	4.1	*2.3	....	....	....	....	to 30	60	77	8.1	3.2	5.8
24....	3.4	2.1	....	....	....	....	140	64	60	7.5	3.6	5.5
25....	3.2	2.0	....	....	....	....	103	69	42	7.8	4.6	5.5
26....	3.0	2.0	....	....	....	....	85	72	39	7.8	4.8	5.8
27....	2.8	1.8	....	....	....	....	46	93	37	8.1	4.8	5.3
28....	2.5	1.8	....	....	....	....	46	106	34	8.4	5.0	4.3
29....	2.5	1.8	....	....	....	....	50	119	31	8.1	4.8	4.8
30....	2.8	1.8	....	....	....	....	50	137	44	6.6	4.8	4.8
31....	2.8	....	....	....	....	....	....	131	....	6.0	6.0	....
Total	85.2	79.1	....	....	....	....	520	1871	2688	370.0	160.4	268.5
Mean..	2.75	2.64	....	....	....	....	74.3	60.4	89.6	11.9	5.17	8.95
Max..	4.6	3.9	....	....	....	....	140	137	160	32	7.2	28
Min..	1.3	1.7	....	....	....	....	46	20	31	6.0	3.2	4.3
Acre-ft.	169	157	....	....	....	....	1030	3710	5330	734	318	533

Total run-off for period=11,981 acre-feet.

*Discharge measurement.

Discharge of Illinois Creek Near Rand, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.1	....	....	....	....	....	....	21	159	51	13	5.7
2....	5.7	....	....	....	....	....	....	17	131	58	11	4.8
3....	6.6	....	....	....	....	....	....	18	201	45	11	5.2
4....	7.0	*5.9	....	....	....	....	....	20	182	31	9.8	6.6
5....	7.0	....	....	....	....	....	....	36	146	27	8.4	7.0
6....	7.5	....	....	....	....	....	....	34	93	28	8.4	6.6
7....	8.4	....	....	....	....	....	....	29	74	33	11	13
8....	8.0	....	....	....	....	....	....	98	74	30	9.8	11
9....	7.5	....	....	....	....	....	....	90	68	28	9.3	9.8
10....	7.5	....	....	....	....	....	....	83	56	24	7.5	8.4
11....	7.5	....	....	....	....	....	....	79	54	21	7.5	7.0
12....	6.6	....	....	....	....	....	....	62	74	24	6.6	6.1
13....	6.6	....	....	....	....	....	....	54	58	107	6.1	5.2
14....	6.6	....	....	....	....	....	....	90	66	110	5.2	4.8
15....	6.1	....	....	....	....	....	....	126	83	54	5.0	5.0
16....	5.7	....	....	....	....	....	....	147	76	47	4.6	5.0
17....	6.6	....	....	....	....	....	....	143	83	39	5.2	5.0
18....	5.7	....	....	....	....	....	....	122	100	31	2.6	5.0
19....	5.0	....	....	....	....	....	....	159	103	24	18	4.4
20....	5.7	....	....	....	....	....	Apr. 22	147	93	23	11	4.6
21....	8.0	....	....	....	....	....	to 30	139	76	22	9.8	4.4
22....	8.0	....	....	....	....	....	60	94	79	23	7.5	4.2
23....	6.6	....	....	....	....	....	54	118	79	17	7.0	4.8
24....	6.1	....	....	....	....	....	40	106	71	16	7.0	8.4
25....	5.7	....	....	....	....	....	34	83	71	15	8.0	8.4
26....	6.1	....	....	....	....	....	47	122	150	14	8.4	6.1
27....	7.0	....	....	....	....	....	54	106	90	13	8.4	5.2
28....	8.0	....	....	....	....	....	38	135	64	16	8.4	4.8
29....	7.5	....	....	....	....	....	25	155	49	26	8.9	4.6
30....	7.0	....	....	....	....	....	20	168	51	28	8.0	5.2
31....	7.0	....	....	....	....	....	....	172	....	16	7.0	....
Total	210.4	....	....	....	....	....	372	3023	2754	1041	282.8	186.3
Mean..	6.79	....	....	....	....	....	41.3	97.5	91.8	33.6	9.12	6.21
Max..	8.4	....	....	....	....	....	60	172	201	110	26	13
Min..	5.0	....	....	....	....	....	20	17	49	13	4.6	4.2
Acre-ft.	417	....	....	....	....	....	738	6000	5460	2060	561	370

Total run-off for period=15,606 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Illinois Creek Near Rand, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	13	9.5	....	....	....	....	....	239	305	136	11	11
2....	16	11	....	....	....	....	....	151	320	100	10	15
3....	13	9.5	....	....	....	....	....	145	338	91	11	44
4....	11	8.5	....	....	....	....	....	78	362	91	11	27
5....	9.5	7.5	....	....	....	....	....	69	332	96	10	21
6....	9.5	8.5	....	....	....	....	....	51	362	91	10	14
7....	8.5	9.5	....	....	....	....	....	65	325	78	9.5	14
8....	9.0	....	....	....	....	....	....	54	288	51	9.5	18
9....	11	....	....	....	....	....	....	60	262	41	13	21
10....	11	....	....	....	....	....	....	69	244	38	14	17
11....	10	....	....	....	....	....	....	91	219	41	14	16
12....	9.5	....	....	....	....	....	....	107	214	41	12	18
13....	9.0	....	....	....	....	....	....	142	242	41	11	27
14....	9.0	....	....	....	....	....	....	219	225	31	10	23
15....	9.5	....	....	....	....	....	....	255	186	34	10	18
16....	11	....	....	....	....	....	....	288	160	31	10	16
17....	9.5	....	....	....	....	....	....	340	142	27	10	16
18....	9.5	....	....	....	....	....	....	335	163	27	9.5	14
19....	9.5	....	....	....	....	....	....	300	160	30	7.5	14
20....	9.0	....	....	....	....	....	....	255	172	31	6.5	13
21....	9.0	....	....	....	....	....	....	210	211	30	5.8	13
22....	9.5	....	....	....	....	....	Apr. 24	185	258	24	5.2	14
23....	10	....	....	....	....	....	to 30	190	268	17	4.6	14
24....	9.5	....	....	....	....	....	....	142	195	216	17	5.0
25....	11	....	....	....	....	....	....	151	202	197	16	8.5
26....	11	....	....	....	....	....	....	177	219	160	16	10
27....	11	....	....	....	....	....	....	142	290	154	16	9.5
28....	10	....	....	....	....	....	....	148	328	145	17	9.5
29....	10	....	....	....	....	....	....	183	394	154	16	10
30....	10	Nov. 1	....	....	....	....	....	236	424	166	15	9.0
31....	9.5	to 7	....	....	....	....	....	....	355	....	13	9.0
Total	317.5	64.0	....	....	....	....	....	1179	6305	6950	1344	295.6
Mean.	10.2	9.14	....	....	....	....	....	168	203	232	43.4	9.54
Max..	16	11	....	....	....	....	....	236	424	362	136	14
Min..	8.5	7.5	....	....	....	....	....	142	51	142	13	4.6
Acre-ft.	630	127	....	....	....	....	....	2340	12510	13790	2670	586

Total run-off for period=33,637 acre-feet.

Discharge of Illinois Creek at Walden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.8	5.3	0	....	....	....	....	19	135	23	6.3	19
2....	2.6	5.2	....	....	....	....	....	15	97	20	8.4	2.8
3....	2.4	5.2	....	....	....	....	....	14	112	15	7.9	2.2
4....	2.2	5.1	....	....	....	....	....	11	268	9.4	4.5	2.0
5....	2.4	5.1	....	....	....	....	....	7.2	326	8.4	3.5	1.5
6....	2.6	7.5	....	....	....	....	....	6.3	226	7.4	2.5	1.8
7....	2.6	9.5	....	....	....	....	....	4.2	124	7.9	2.5	1.6
8....	2.6	7.0	....	....	....	....	....	5.1	84	7.9	2.2	1.5
9....	2.6	7.5	....	....	....	....	....	5.1	65	6.8	2.0	1.5
10....	2.6	6.5	....	....	....	....	....	4.6	54	6.3	1.8	1.3
11....	2.6	6.5	....	....	....	....	....	3.8	31	6.3	1.6	1.0
12....	2.4	8.5	....	....	....	....	....	3.0	20	8.4	1.5	.8
13....	2.2	12	....	....	....	....	....	3.4	17	34	1.3	.6
14....	1.8	17	....	....	....	....	....	3.0	15	142	1.1	.8
15....	1.6	25	....	....	....	....	....	2.4	11	218	1.0	.6
16....	1.6	22	....	....	....	....	....	2.2	10	108	.8	.5
17....	1.6	5.4	....	....	....	....	....	1.9	8.2	61	.8	.4
18....	1.6	3.3	....	....	....	....	....	2.4	7.2	46	.8	.3
19....	1.8	4.2	....	....	....	....	....	2.4	6.7	36	.7	.2
20....	3.3	5.1	....	....	....	....	....	1.7	8.7	30	.7	.1
21....	5.1	8.0	....	....	....	....	Apr. 23	1.1	11	22	.8	.2
22....	5.4	11	....	....	....	....	to 30	1.1	12	17	1.0	.2
23....	5.4	3.6	....	....	....	....	....	57	1.3	13	.7	.2
24....	5.1	1.0	....	....	....	....	....	53	1.7	10	.8	.2
25....	5.4	.6	....	....	....	....	....	41	2.4	10	9.4	1.0
26....	5.7	.3	....	....	....	....	....	44	3.8	42	8.4	.8
27....	5.4	0	....	....	....	....	....	39	4.2	64	7.9	.8
28....	5.4	0	....	....	....	....	....	39	5.1	50	6.8	.8
29....	5.4	0	....	....	....	....	....	29	5.5	28	6.3	1.5
30....	5.4	0	....	....	....	....	....	22	9.7	26	5.8	1.6
31....	5.4	....	....	....	....	....	....	....	54	....	5.5	....
Total	104.0	197.4	....	....	....	....	....	324	207.6	1891.8	914.9	67.2
Mean.	3.35	6.58	....	....	....	....	....	40.5	6.70	63.1	29.5	2.17
Max..	5.7	25	....	....	....	....	....	57	54	326	218	8.4
Min..	1.6	0	....	....	....	....	....	22	1.1	6.7	5.5	.7
Acre-ft.	206	392	....	....	....	....	....	643	412	3750	1810	133

Total run-off for period=7,430 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Illinois Creek at Walden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0.4	9.0	....	....	....	....	....	238	394	160	2.3	17
2....	0.4	5.3	....	....	....	....	....	296	339	138	2.0	26
3....	0.4	4.6	....	....	....	....	....	244	292	99	2.3	56
4....	1.5	4.3	....	....	....	....	....	228	298	75	2.0	52
5....	3.6	3.6	....	....	....	....	....	168	316	53	1.8	39
6....	4.5	2.3	....	....	....	....	....	143	352	42	1.3	23
7....	6.0	3.1	....	....	....	....	....	108	381	33	1.5	14
8....	7.0	3.3	....	....	....	....	....	95	429	26	1.0	15
9....	6.5	3.3	....	....	....	....	....	85	425	23	0.8	13
10....	6.0	3.9	....	....	....	....	....	78	422	20	1.8	12
11....	5.6	5.0	....	....	....	....	....	71	345	22	2.0	15
12....	5.4	4.3	....	....	....	....	....	69	296	24	2.0	40
13....	5.4	2.8	....	....	....	....	....	65	244	20	3.6	52
14....	5.6	5.3	....	....	....	....	Apr. 16	53	238	18	5.3	36
15....	5.8	6.3	....	....	....	....	to 30	60	274	17	6.0	23
16....	6.0	5.6	....	....	....	....	314	118	256	16	6.3	16
17....	6.0	6.0	....	....	....	....	328	138	201	19	5.0	11
18....	7.0	5.6	....	....	....	....	431	173	150	26	4.6	9.0
19....	9.4	5.3	....	....	....	....	525	205	141	23	3.6	7.4
20....	9.8	6.0	....	....	....	....	405	238	147	20	2.3	6.7
21....	10	7.0	....	....	....	....	387	280	155	15	1.3	6.3
22....	9.8	7.0	....	....	....	....	394	264	214	11	0.7	6.0
23....	10	6.7	....	....	....	....	422	240	326	9.0	0.6	5.3
24....	9.4	7.4	....	....	....	....	398	201	330	8.2	0.7	5.0
25....	9.0	7.8	....	....	....	....	383	162	258	6.7	5.0	6.0
26....	9.0	5.3	....	....	....	....	378	149	194	6.0	8.2	6.0
27....	8.6	5.6	....	....	....	....	345	155	168	5.0	3.6	5.6
28....	8.6	7.0	....	....	....	....	240	189	140	3.9	5.3	6.0
29....	8.2	6.7	....	....	....	....	223	236	117	3.1	5.6	5.6
30....	8.2	6.7	....	....	....	....	223	274	116	2.6	6.7	5.6
31....	7.8	....	....	....	....	....	....	352	....	2.8	9.4	....
Total	200.9	162.1	....	....	....	....	5396	5375	7958	947.3	104.6	540.5
Mean.	6.48	5.40	....	....	....	....	360	173	265	30.6	3.37	18.0
Max..	10	9.0	....	....	....	....	525	352	429	160	9.4	56
Min..	0.4	2.3	....	....	....	....	223	53	116	2.6	0.6	5.0
Acre-ft.	398	322	....	....	....	....	10700	10660	15780	1880	207	1070

Total run-off for period=41,017 acre-feet.

Discharge of North Fork of North Platte River Near Walden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	263	178	110	47
2....	135	210	104	45
3....	329	142	104	43
4....	310	121	92	46
5....	299	147	83	45
6....	174	138	83	44
7....	106	150	81	42
8....	86	159	78	41
9....	76	145	73	39
10....	May 12	83	223	73	40
11....	to 31	64	159	69	38
12....	57	57	157	64	36
13....	41	76	195	63	34
14....	45	78	178	59	29
15....	69	108	126	56	29
16....	53	128	133	59	29
17....	54	142	128	70	28
18....	55	176	198	88	27
19....	70	198	164	69	22
20....	83	193	138	59	22
21....	63	229	121	53	22
22....	63	249	108	49	22
23....	76	260	108	48	23
24....	104	244	119	48	38
25....	154	234	142	50	32
26....	186	321	135	48	27
27....	117	203	119	46	26
28....	119	169	142	45	26
29....	176	150	121	52	26
30....	241	145	115	57	25
31....	332	....	119	52	....
Total	2158	5285	4538	2085	993
Mean.	108	176	146	67.3	33.1
Max..	332	329	223	110	47
Min..	41	57	108	45	22
Acre-ft.	4280	10480	9000	4140	1970

Total run-off for period=29,870 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Fork of North Platte River Near Walden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	26	40	....	....	....	....	....	358	129	279	123	79
2....	25	42	....	....	....	....	....	331	121	235	116	95
3....	26	40	....	....	....	....	....	314	136	199	139	121
4....	26	39	....	....	....	....	....	314	175	160	134	110
5....	28	35	....	....	....	....	....	306	204	136	113	100
6....	28	34	....	....	....	....	....	298	246	121	105	97
7....	28	42	....	....	....	....	....	250	287	100	103	95
8....	32	40	....	....	....	....	....	175	296	97	95	95
9....	32	44	....	....	....	....	....	135	301	82	100	79
10....	30	45	....	....	....	....	....	116	350	70	105	77
11....	30	43	....	....	....	....	Apr. 13	100	355	70	97	70
12....	31	42	....	....	....	....	to 30	92	298	69	87	82
13....	35	35	....	....	....	....	*80	79	285	67	82	95
14....	35	43	....	....	....	....	95	90	285	97	77	77
15....	36	40	....	....	....	....	120	121	269	168	72	63
16....	41	38	....	....	....	....	150	204	230	194	77	56
17....	40	35	....	....	....	....	230	199	212	157	74	55
18....	54	32	....	....	....	....	340	191	217	194	61	51
19....	57	30	....	....	....	....	420	152	235	147	53	48
20....	47	28	....	....	....	....	500	118	235	142	50	47
21....	44	27	....	....	....	....	490	105	298	160	48	46
22....	42	24	....	....	....	....	480	92	322	142	47	43
23....	41	*21	....	....	....	....	476	63	290	131	46	44
24....	42	23	....	....	....	....	458	61	269	129	50	44
25....	42	24	....	....	....	....	439	69	240	121	52	44
26....	41	21	....	....	....	....	439	79	220	126	67	41
27....	40	20	....	....	....	....	409	113	259	152	65	41
28....	40	19	....	....	....	....	376	160	261	144	74	40
29....	38	19	....	....	....	....	360	181	253	139	79	39
30....	38	19	....	....	....	....	358	181	282	134	72	39
31....	38	....	....	....	....	....	....	162	....	129	79	....
Total	1133	984	....	....	....	....	6220	5209	7500	4291	2542	2013
Mean..	36.5	32.8	....	....	....	....	346	168	252	138	82.0	67.1
Max..	57	45	....	....	....	....	500	358	355	279	139	121
Min..	25	19	....	....	....	....	80	61	121	67	46	39
Acre-ft.	2250	1950	....	....	....	....	12340	10330	15000	8510	5040	3990

Total run-off for period=59,410 acre-feet.

*Discharge measurement.

Discharge of Owl Creek Near Lindland, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	11	4.3	0.2
2....	9.6	3.1	2.1
3....	8.6	2.9	2.2
4....	7.9	2.4	2.6
5....	7.4	1.8	1.9
6....	5.6	1.1	1.2
7....	4.4	.4	5.2
8....	6.2	.7	5.4
9....	6.4	1.5	4.0
10....	5.0	2.0	3.2
11....	3.5	1.6	2.4
12....	June 14	2.8	1.4	2.0
13....	to 30	5.0	1.3	1.4
14....	9.5	6.5	1.1	.8
15....	9.8	7.5	.8	.6
16....	11	6.0	.4	.3
17....	11	6.2	.6	.1
18....	11	4.7	1.5	.1
19....	11	1.3	1.4	.1
20....	6.8	2.8	2.0	1.2
21....	8.0	2.5	2.1	1.4
22....	8.9	4.0	1.2	1.2
23....	8.9	7.7	1.3	.4
24....	8.4	8.0	1.4	.2
25....	8.6	8.2	1.5	.1
26....	8.0	7.0	1.0	.1
27....	6.5	7.0	.8	.1
28....	6.7	7.5	.4	.1
29....	8.4	7.0	.4	.1
30....	11	7.7	.4	.1
31....	7.5	.1	....
Total	153.5	192.5	42.9	40.8
Mean..	9.03	6.21	1.38	1.36
Max..	11	11	4.3	5.4
Min..	6.5	1.3	.1	.1
Acre-ft.	304	382	85	81

Total run-off for period=852 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Michigan River Near Lindland, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	13	4.4	....	....	....	....	....	7.5	115	26	18	11
2....	12	4.0	....	....	....	....	....	8.1	126	33	16	12
3....	12	8.0	....	....	....	....	....	8.6	164	22	15	11
4....	11	7.9	....	....	....	....	....	11	158	28	14	11
5....	11	....	....	....	....	....	....	25	126	33	12	12
6....	14	....	....	....	....	....	....	29	97	36	11	23
7....	13	....	....	....	....	....	....	42	82	35	12	20
8....	11	....	....	....	....	....	....	56	67	29	11	17
9....	11	....	....	....	....	....	....	59	61	29	10	15
10....	11	....	....	....	....	....	....	76	61	45	10	14
11....	10	....	....	....	....	....	....	69	65	53	9.8	14
12....	11	....	....	....	....	....	....	53	88	65	9.2	12
13....	11	....	....	....	....	....	....	62	64	211	9.2	10
14....	13	....	....	....	....	....	....	69	67	133	10	9.8
15....	12	....	....	....	....	....	....	95	81	74	9.8	11
16....	11	....	....	....	....	....	....	106	88	42	10	11
17....	11	....	....	....	....	....	....	118	122	29	13	11
18....	9.0	....	....	....	....	....	....	122	135	29	30	11
19....	8.0	....	....	....	....	....	....	126	128	18	18	11
20....	13	....	....	....	....	....	....	88	116	14	15	8.6
21....	12	....	....	....	....	....	....	81	120	13	11	8.1
22....	9.0	....	....	....	....	....	....	62	120	11	10	8.6
23....	7.2	....	....	....	....	....	....	102	118	11	9.8	12
24....	6.4	....	....	....	....	....	....	107	88	13	11	20
25....	6.4	....	....	....	....	....	....	98	95	13	11	16
26....	6.4	....	....	....	....	....	....	79	152	13	11	14
27....	7.2	....	....	....	....	....	....	98	67	14	11	13
28....	9.0	....	....	....	....	....	21	150	42	14	13	11
29....	9.0	....	....	....	....	....	11	152	33	13	20	11
30....	4.4	....	....	....	....	....	9.2	145	29	15	19	10
31....	4.0	....	....	....	....	....	....	124	....	17	15	....
Total	309.0	....	....	....	....	....	....	2428.2	2875	1131	404.8	379.1
Mean.	9.97	....	....	....	....	....	....	78.3	95.8	36.5	13.1	12.6
Max..	14	....	....	....	....	....	....	152	164	211	30	23
Min..	4.0	....	....	....	....	....	....	7.5	29	11	9.2	8.1
Acre-ft.	613	....	....	....	....	....	....	4820	5700	2240	803	752

Total run-off for period=14,928 acre-feet.

Discharge of Michigan River Near Lindland, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	11	....	....	....	....	....	168	379	194	19	17
2....	16	11	....	....	....	....	....	126	410	181	20	24
3....	15	10	....	....	....	....	....	89	449	144	21	58
4....	19	9.8	....	....	....	....	....	66	470	122	21	31
5....	18	7.0	....	....	....	....	....	50	499	96	21	23
6....	19	8.6	....	....	....	....	....	63	530	73	21	21
7....	14	11	....	....	....	....	....	68	483	57	21	23
8....	11	21	....	....	....	....	....	48	447	50	21	34
9....	12	22	....	....	....	....	....	26	389	45	31	34
10....	10	11	....	....	....	....	....	32	392	38	28	41
11....	10	12	....	....	....	....	....	35	374	27	27	45
12....	15	11	....	....	....	....	....	41	384	26	26	50
13....	16	18	....	....	....	....	....	78	392	19	23	65
14....	13	22	....	....	....	....	....	142	324	16	22	63
15....	11	12	....	....	....	....	....	170	283	16	24	48
16....	13	10	....	....	....	....	....	244	259	17	19	44
17....	11	11	....	....	....	....	....	280	256	16	17	44
18....	13	17	....	....	....	....	....	266	271	16	15	37
19....	12	45	....	....	....	....	....	237	256	15	15	34
20....	10	11	....	....	....	....	....	209	271	14	16	32
21....	12	9.2	....	....	....	....	....	205	340	13	15	31
22....	11	10	....	....	....	....	....	207	483	12	16	27
23....	13	....	....	....	....	....	Apr. 25	200	405	12	17	28
24....	14	....	....	....	....	....	to 30	230	337	15	18	32
25....	14	....	....	....	....	....	51	242	290	17	16	30
26....	12	....	....	....	....	....	56	276	235	19	15	27
27....	11	....	....	....	....	....	56	335	211	21	17	24
28....	11	....	....	....	....	....	63	374	189	19	24	21
29....	10	....	....	....	....	....	100	452	189	19	22	18
30....	10	Nov. 1	....	....	....	....	142	449	211	22	18	14
31....	10	to 22	....	....	....	....	....	363	....	21	21	....
Total	401	310.6	....	....	....	....	....	468	5771	10408	627	1020
Mean.	12.9	14.1	....	....	....	....	....	78.0	186	347	20.2	34.0
Max..	19	45	....	....	....	....	....	142	452	530	31	65
Min..	10	7.0	....	....	....	....	....	51	26	189	12	15
Acre-ft.	795	616	....	....	....	....	....	928	11450	20640	2720	2020

Total run-off for period=40,409 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Michigan River at Haworth School Near Lindland, Colo., for Year Ending
Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	13	151	52	28	15
2....	14	141	44	27	14
3....	15	207	38	25	14
4....	36	197	35	23	13
5....	44	173	40	20	12
6....	47	136	42	18	14
7....	62	118	49	17	25
8....	75	110	46	16	22
9....	77	95	43	15	17
10....	92	90	50	14	14
11....	87	92	68	14	14
12....	70	99	79	12	14
13....	75	87	249	12	12
14....	77	86	239	12	12
15....	115	87	123	12	12
16....	124	88	87	12	12
17....	136	110	61	14	12
18....	140	117	64	30	14
19....	145	111	49	26	14
20....	106	110	39	22	13
21....	98	110	33	18	14
22....	70	117	29	16	13
23....	95	120	26	16	14
24....	94	99	26	16	19
25....	99	102	24	19	16
26....	88	173	23	18	14
27....	81	101	24	16	14
28....	116	70	26	16	13
29....	125	55	26	19	13
30....	165	54	27	24	12
31....	169	....	32	20	....
Total	2750	3406	1793	567	431
Mean..	88.7	114	57.8	18.3	14.4
Max....	169	207	249	30	25
Min....	13	54	23	12	12
Acre-ft.	5450	6760	3560	1120	855

Total run-off for period=17,740 acre-feet.

**Discharge of Michigan River at Haworth School Near Lindland, Colo., for Year Ending
Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	17	14	....	....	....	....	....	278	441	302	25	26
2....	17	13	....	....	....	....	....	170	458	266	24	34
3....	14	13	....	....	....	....	....	156	477	215	25	57
4....	16	12	....	....	....	....	....	112	506	170	24	41
5....	16	12	....	....	....	....	....	90	506	143	23	39
6....	18	11	....	....	....	....	....	70	551	116	23	29
7....	19	14	....	....	....	....	....	64	539	104	26	33
8....	16	13	....	....	....	....	....	58	515	83	26	39
9....	16	12	....	....	....	....	....	60	467	72	46	44
10....	14	14	....	....	....	....	....	68	455	65	37	49
11....	14	14	....	....	....	....	....	78	443	59	34	50
12....	14	21	....	....	....	....	Apr. 14	88	424	54	31	63
13....	17	23	....	....	....	....	to 30	147	458	50	28	82
14....	16	22	....	....	....	....	23	230	450	46	30	72
15....	15	25	....	....	....	....	24	227	383	46	31	55
16....	18	26	....	....	....	....	22	287	347	46	29	46
17....	16	23	....	....	....	....	25	297	333	41	26	40
18....	18	....	....	....	....	....	33	294	338	42	22	37
19....	17	....	....	....	....	....	40	287	345	39	22	32
20....	15	....	....	....	....	....	33	256	345	32	22	31
21....	16	....	....	....	....	....	39	232	393	37	21	29
22....	16	....	....	....	....	....	45	246	501	31	20	28
23....	16	....	....	....	....	....	54	239	498	30	20	29
24....	17	....	....	....	....	....	72	287	422	29	20	30
25....	18	....	....	....	....	....	102	302	378	30	19	30
26....	16	....	....	....	....	....	111	311	345	30	20	28
27....	16	....	....	....	....	....	114	362	323	30	24	27
28....	14	....	....	....	....	....	122	386	294	29	37	24
29....	14	....	....	....	....	....	152	441	309	28	34	23
30....	14	Nov. 1	....	....	....	....	225	491	359	25	28	22
31....	14	to 17	....	....	....	....	....	441	....	25	27	....
Total	494	282	....	....	....	....	1236	7055	12603	2315	824	1169
Mean..	15.9	16.6	....	....	....	....	72.7	228	420	74.7	26.6	39.0
Max....	19	26	....	....	....	....	225	491	551	302	46	82
Min....	14	11	....	....	....	....	22	58	294	25	19	22
Acre-ft.	980	559	....	....	....	....	2450	13990	25000	4590	1630	2320

Total run-off for period=51,519 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Michigan River at Walden, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	17	28	....	....	....	....	....	50	136	42	30	20
2....	17	31	....	....	....	....	....	47	98	24	29	19
3....	17	30	....	....	....	....	....	49	130	20	27	17
4....	16	28	....	....	....	....	....	51	259	13	25	18
5....	16	26	....	....	....	....	....	60	259	13	22	18
6....	18	24	....	....	....	....	....	56	176	15	20	17
7....	18	22	....	....	....	....	....	49	111	20	17	19
8....	19	20	....	....	....	....	....	39	74	23	14	20
9....	18	18	....	....	....	....	....	43	55	21	13	20
10....	20	18	....	....	....	....	....	45	48	22	11	18
11....	20	16	....	....	....	....	....	51	31	19	10	15
12....	22	16	....	....	....	....	....	37	21	35	10	15
13....	23	17	....	....	....	....	....	20	*18	125	10	14
14....	24	17	....	....	....	....	....	17	15	365	9.5	12
15....	26	18	....	....	....	....	....	15	15	289	7.9	9.0
16....	24	19	....	....	....	....	....	14	15	116	9.0	8.4
17....	22	20	....	....	....	....	....	15	19	85	11	7.9
18....	20	18	....	....	....	....	....	8.4	43	74	17	8.4
19....	18	16	....	....	....	....	....	5.3	66	53	25	9.0
20....	24	14	....	....	....	....	....	4.5	64	41	27	10
21....	28	14	....	....	....	....	....	4.2	64	32	23	9.0
22....	26	14	....	....	....	....	Apr. 24	7.9	76	29	19	7.4
23....	26	13	....	....	....	....	to 30	7.9	66	19	15	7.4
24....	26	13	....	....	....	....	132	21	56	15	15	9.5
25....	24	12	....	....	....	....	121	62	47	15	16	8.4
26....	24	11	....	....	....	....	119	103	96	12	18	10
27....	24	13	....	....	....	....	114	82	100	12	18	10
28....	24	14	....	....	....	....	104	64	48	14	16	11
29....	22	13	....	....	....	....	90	93	27	14	15	11
30....	22	10	....	....	....	....	63	121	31	15	16	12
31....	24	....	....	....	....	....	....	125	....	17	18	....
Total	669	543	....	....	....	....	743	1367.2	2264	1609	533.4	390.4
Mean	21.6	18.1	....	....	....	....	106	44.1	75.5	51.9	17.2	13.0
Max...	28	31	....	....	....	....	132	125	259	365	30	20
Min...	16	10	....	....	....	....	63	4.2	15	12	7.9	7.4
Acre-ft.	1330	1080	....	....	....	....	1470	2710	4490	3190	1060	774

Total run-off for period=16,104 acre-feet.

*Estimated.

Discharge of Michigan River at Walden, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	12	23	....	....	....	....	....	376	364	242	23	38
2....	14	23	....	....	....	....	....	389	340	202	25	42
3....	17	23	....	....	....	....	....	278	360	156	23	65
4....	16	23	....	....	....	....	....	242	389	124	25	68
5....	14	23	....	....	....	....	....	214	410	101	20	51
6....	18	22	....	....	....	....	....	163	436	69	17	43
7....	20	26	....	....	....	....	....	128	530	50	23	35
8....	19	28	....	....	....	....	....	119	590	42	23	39
9....	18	31	....	....	....	....	....	104	535	32	27	47
10....	16	31	....	....	....	....	....	90	477	26	44	53
11....	15	33	....	....	....	....	....	93	414	25	45	61
12....	14	38	....	....	....	....	....	96	385	29	42	89
13....	14	35	....	....	....	....	Apr. 15	93	356	27	38	103
14....	16	35	....	....	....	....	to 30	122	356	24	35	111
15....	18	30	....	....	....	....	140	176	364	26	33	96
16....	17	28	....	....	....	....	150	236	317	25	35	79
17....	18	28	....	....	....	....	185	239	268	23	29	66
18....	18	20	....	....	....	....	248	242	229	24	25	58
19....	21	22	....	....	....	....	306	229	226	22	20	54
20....	21	23	....	....	....	....	182	242	232	22	18	50
21....	20	24	....	....	....	....	185	248	255	19	18	48
22....	20	24	....	....	....	....	190	236	324	21	17	46
23....	24	24	....	....	....	....	223	211	468	28	12	44
24....	24	*25	....	....	....	....	239	199	525	30	16	44
25....	25	24	....	....	....	....	299	193	402	27	19	45
26....	25	22	....	....	....	....	321	185	275	28	25	44
27....	24	21	....	....	....	....	265	185	252	31	31	43
28....	23	22	....	....	....	....	242	229	232	34	34	41
29....	23	24	....	....	....	....	261	261	193	33	35	39
30....	23	25	....	....	....	....	303	328	190	30	34	35
31....	23	....	....	....	....	....	....	414	....	26	36	....
Total	590	780	....	....	....	....	3739	6560	10694	1598	847	1677
Mean	19.0	26.0	....	....	....	....	234	212	356	51.5	27.3	55.9
Max...	25	38	....	....	....	....	321	389	590	242	45	111
Min...	12	20	....	....	....	....	140	90	190	19	12	35
Acre-ft.	1170	1550	....	....	....	....	7420	13010	21210	3170	1680	3330

Total run-off for period=52,540 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Michigan River Near Cowdrey, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	124	35	25	11
2.....	247	18	31	12
3.....	128	10	32	11
4.....	296	7.2	25	11
5.....	500	6.1	20	10
6.....	402	5.0	16	10
7.....	241	5.0	13	11
8.....	145	5.0	10	10
9.....	99	5.4	8.5	11
10.....	63	5.4	7.5	12
11.....	21	5.4	7.5	10
12.....	9.5	6.1	6.4	8.5
13.....	5.0	2.4	6.4	8.0
14.....	2.9	272	6.1	7.5
15.....	2.0	482	5.8	6.4
16.....	2.0	272	5.8	5.4
17.....	May 19	1.5	147	7.5	4.7
18.....	to 31	1.2	131	9.5	4.7
19.....	0.9	1.8	101	12	5.0
20.....	0.9	3.2	84	16	5.0
21.....	1.0	4.4	63	16	5.0
22.....	1.0	5.8	43	14	4.7
23.....	1.1	8.5	31	12	5.0
24.....	1.0	6.1	23	11	5.0
25.....	1.8	6.4	25	10	5.4
26.....	2.9	14	23	10	5.4
27.....	5.4	40	23	10	5.8
28.....	4.4	39	26	10	5.4
29.....	6.8	19	25	10	5.8
30.....	17	14	23	9.5	6.1
31.....	40	.....	22	9.5	.....
Total	84.2	2452.3	1953.6	393.0	227.8
Mean.	6.48	81.7	63.0	12.7	7.59
Max..	40	500	482	32	12
Min..	0.9	1.2	5.0	5.8	4.7
Acre-ft.	167	4860	3870	780	452

Total run-off for period=10,130 acre-feet.

Discharge of Michigan River Near Cowdrey, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	6.8	17	.....	.....	.....	.....	.....	520	710	308	25	63
2.....	6.8	18	.....	.....	.....	.....	.....	650	678	332	20	65
3.....	7.5	17	.....	.....	.....	.....	.....	568	606	255	22	110
4.....	9.0	16	.....	.....	.....	.....	.....	490	590	187	20	114
5.....	7.5	16	.....	.....	.....	.....	.....	390	634	139	19	92
6.....	8.5	14	.....	.....	.....	.....	.....	320	683	104	16	72
7.....	10	18	.....	.....	.....	.....	.....	233	771	82	16	54
8.....	12	17	.....	.....	.....	.....	.....	192	820	78	17	52
9.....	11	20	.....	.....	.....	.....	.....	177	832	61	17	54
10.....	10	24	.....	.....	.....	.....	.....	156	820	56	23	56
11.....	9.5	24	.....	.....	.....	.....	.....	146	754	47	41	63
12.....	9.0	26	.....	.....	.....	.....	.....	144	666	50	39	108
13.....	9.0	31	.....	.....	.....	.....	.....	130	584	47	35	146
14.....	9.5	28	.....	.....	.....	.....	Apr. 16	117	540	44	35	156
15.....	10	21	.....	.....	.....	.....	to 30	128	573	44	35	130
16.....	12	26	.....	.....	.....	.....	551	255	584	44	36	104
17.....	12	27	.....	.....	.....	.....	573	290	470	42	32	86
18.....	15	17	.....	.....	.....	.....	700	336	353	44	23	70
19.....	17	20	.....	.....	.....	.....	881	349	304	44	17	63
20.....	18	22	.....	.....	.....	.....	804	372	297	39	14	57
21.....	19	25	.....	.....	.....	.....	661	460	320	35	14	52
22.....	20	26	.....	.....	.....	.....	694	435	385	30	12	49
23.....	20	27	.....	.....	.....	.....	744	395	600	30	12	46
24.....	20	*28	.....	.....	.....	.....	754	353	771	33	12	44
25.....	19	26	.....	.....	.....	.....	744	293	727	33	15	47
26.....	17	24	.....	.....	.....	.....	760	272	556	33	23	46
27.....	17	22	.....	.....	.....	.....	749	255	470	38	32	44
28.....	17	25	.....	.....	.....	.....	612	297	425	35	36	41
29.....	16	26	.....	.....	.....	.....	495	390	312	32	33	41
30.....	16	27	.....	.....	.....	.....	500	470	255	30	35	38
31.....	16	.....	.....	.....	.....	.....	.....	606	.....	28	39	.....
Total	407.1	675	.....	.....	.....	.....	10222	10189	17090	2404	765	2163
Mean.	13.1	22.5	.....	.....	.....	.....	681	329	570	77.5	24.7	72.1
Max..	20	31	.....	.....	.....	.....	881	650	832	332	41	156
Min..	6.8	14	.....	.....	.....	.....	495	117	255	28	12	38
Acre-ft.	807	1340	.....	.....	.....	.....	20280	20210	33900	4770	1520	4290

Total run-off for period=87,117 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Canadian River at Cowdrey, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	30	65	22	33	8.8
2....	28	50	19	30	7.7
3....	30	37	20	24	7.4
4....	31	103	18	20	7.4
5....	36	176	15	18	8.0
6....	33	140	12	16	8.8
7....	28	90	11	14	9.6
8....	23	68	10	15	11
9....	26	66	10	14	8.0
10....	28	60	9.6	13	7.1
11....	29	39	9.2	11	6.2
12....	18	33	12	10	5.6
13....	15	22	18	9.2	5.0
14....	13	18	68	7.4	4.8
15....	12	21	98	6.8	4.6
16....	11	23	57	6.2	4.4
17....	11	23	46	7.4	4.0
18....	9	16	55	10	4.0
19....	8	14	49	11	4.0
20....	8	17	34	13	4.0
21....	9	24	28	11	4.0
22....	9	26	26	8.8	5.3
23....	6	27	24	7.4	4.8
24....	10	20	22	6.5	7.4
25....	15	20	20	7.4	9.2
26....	12	30	23	8.0	8.8
27....	7	62	33	8.0	8.4
28....	4	38	35	8.0	8.0
29....	6	25	46	10	7.7
30....	19	22	33	9.6	7.7
31....	45	....	30	8.8	....
Total	569	1375	912.8	382.5	201.7
Mean.	18.4	45.8	29.4	12.3	6.72
Max.	45	176	98	33	11
Min.	4	14	9.2	6.2	4.0
Acre-ft.	1130	2730	1810	759	400

Total run-off for period=6,830 acre-feet.

Discharge of Canadian River at Cowdrey, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	7.7	14	....	....	....	....	....	172	360	162	17	22
2....	8.8	15	....	....	....	....	....	216	312	151	16	23
3....	11	15	....	....	....	....	....	134	321	117	14	32
4....	10	15	....	....	....	....	....	130	339	96	14	31
5....	9.6	15	....	....	....	....	....	90	331	82	13	30
6....	9.6	12	....	....	....	....	....	73	357	64	12	25
7....	10	10	....	....	....	....	....	53	425	48	12	22
8....	12	11	....	....	....	....	....	44	393	54	14	21
9....	15	18	....	....	....	....	Apr. 11	41	376	49	14	19
10....	14	14	....	....	....	....	to 30	37	366	42	18	19
11....	15	13	....	....	....	....	*40	34	319	32	20	21
12....	15	15	....	....	....	....	50	45	269	28	18	34
13....	16	15	....	....	....	....	60	59	256	26	18	40
14....	17	15	....	....	....	....	80	70	258	25	16	46
15....	18	15	....	....	....	....	100	141	253	25	16	38
16....	18	15	....	....	....	....	125	250	226	27	18	29
17....	18	16	....	....	....	....	159	231	194	27	16	25
18....	20	16	....	....	....	....	220	205	172	33	14	23
19....	19	14	....	....	....	....	398	199	175	37	12	21
20....	17	14	....	....	....	....	245	231	168	34	10	20
21....	16	13	....	....	....	....	121	236	164	34	9.0	19
22....	16	14	....	....	....	....	134	224	192	31	8.7	18
23....	16	15	....	....	....	....	151	215	271	25	8.4	18
24....	15	*14	....	....	....	....	175	176	312	23	8.4	19
25....	15	13	....	....	....	....	181	170	237	20	9.0	18
26....	16	13	....	....	....	....	210	173	178	20	15	18
27....	16	13	....	....	....	....	183	204	186	21	19	16
28....	15	12	....	....	....	....	130	244	176	22	20	16
29....	15	12	....	....	....	....	130	281	145	20	22	15
30....	15	12	....	....	....	....	156	357	133	20	18	14
31....	14	....	....	....	....	....	....	398	....	18	16	....
Total	449.7	418	....	....	....	....	3048	5136	7864	1413	455.5	712
Mean.	14.5	13.9	....	....	....	....	152	166	262	45.6	14.7	23.7
Max.	20	18	....	....	....	....	398	398	425	162	22	46
Min.	7.7	10	....	....	....	....	40	34	133	18	8.4	14
Acre-ft.	892	829	....	....	....	....	6050	10190	15600	2800	903	1410

Total run-off for period=38,674 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Laramie River Near Glendevey, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	30	27	....	....	....	....	14	43	190	51	23	20
2....	29	24	....	....	....	....	13	42	172	37	19	22
3....	28	32	....	....	....	....	14	36	218	29	19	25
4....	28	29	....	....	....	....	16	37	213	25	18	25
5....	29	22	....	....	....	....	16	61	183	25	16	25
6....	33	22	....	....	....	....	17	74	134	25	14	23
7....	30	22	....	....	....	....	18	107	138	28	16	23
8....	28	33	....	....	....	....	18	143	135	32	16	23
9....	27	37	....	....	....	....	16	178	116	30	15	23
10....	25	33	....	....	....	....	17	172	104	51	13	22
11....	25	28	....	....	....	....	16	150	104	47	13	23
12....	22	26	....	....	....	....	18	118	120	56	13	23
13....	22	26	....	....	....	....	20	117	92	77	16	23
14....	21	23	....	....	....	....	31	164	96	53	15	23
15....	22	22	....	....	....	....	62	208	107	31	14	23
16....	22	20	....	....	....	....	67	190	111	25	21	23
17....	23	20	....	....	....	....	45	172	129	23	33	23
18....	23	20	....	....	....	....	39	172	130	27	24	22
19....	22	22	....	....	....	....	41	168	114	22	22	22
20....	29	21	....	....	....	....	41	134	111	19	18	21
21....	30	22	....	....	....	....	56	118	113	20	16	20
22....	30	19	....	....	....	....	72	124	126	25	14	20
23....	27	23	....	....	....	....	56	150	111	25	14	22
24....	26	26	....	....	....	....	44	123	85	23	14	30
25....	25	20	....	....	....	....	45	151	86	22	16	25
26....	25	21	....	....	....	....	50	130	126	22	16	26
27....	24	22	....	....	....	....	67	113	69	36	14	25
28....	25	21	....	....	....	....	57	129	52	30	14	24
29....	23	18	....	....	....	....	51	150	39	27	20	25
30....	25	18	....	....	....	....	44	200	42	26	22	24
31....	28	....	....	....	....	....	....	158	....	30	22	....
Total	806	719	....	....	....	....	1081	4032	3566	999	540	698
Mean..	26.0	24.0	....	....	....	....	36.0	130	119	32.2	17.4	23.3
Max..	33	37	....	....	....	....	72	208	218	77	33	30
Min..	21	18	....	....	....	....	13	36	39	19	13	20
Acre-ft.	1600	1430	....	....	....	....	2140	8000	7070	1980	1070	1380

Total run-off for period=24,670 acre-feet.

Discharge of Laramie River Near Glendevey, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	26	26	....	....	....	....	....	167	500	375	20	39
2....	29	25	....	....	....	....	....	145	546	268	19	41
3....	30	23	....	....	....	....	....	144	580	221	20	81
4....	29	23	....	....	....	....	....	129	576	185	18	52
5....	30	19	....	....	....	....	....	107	568	162	19	45
6....	30	19	....	....	....	....	....	95	546	138	18	39
7....	30	23	....	....	....	....	....	86	542	120	22	38
8....	30	25	....	....	....	....	....	76	511	110	18	39
9....	29	23	....	....	....	....	....	78	462	104	22	36
10....	29	22	....	....	....	....	Apr. 12	76	440	100	21	37
11....	28	21	....	....	....	....	to 30	76	395	96	19	38
12....	30	20	....	....	....	....	26	83	389	93	18	52
13....	30	22	....	....	....	....	32	95	433	92	18	67
14....	25	22	....	....	....	....	32	104	437	89	21	51
15....	27	22	....	....	....	....	30	137	259	89	20	40
16....	32	22	....	....	....	....	28	232	214	86	19	35
17....	32	22	....	....	....	....	32	275	368	86	18	33
18....	40	20	....	....	....	....	46	259	489	86	16	30
19....	34	21	....	....	....	....	59	253	448	82	16	30
20....	32	22	....	....	....	....	47	221	378	77	16	29
21....	34	23	....	....	....	....	49	197	419	67	15	28
22....	35	24	....	....	....	....	56	182	610	47	22	28
23....	31	24	....	....	....	....	70	204	576	28	24	29
24....	32	23	....	....	....	....	78	253	444	27	25	29
25....	30	22	....	....	....	....	96	297	399	27	29	34
26....	26	21	....	....	....	....	102	345	378	26	32	40
27....	25	19	....	....	....	....	95	426	352	25	40	42
28....	25	20	....	....	....	....	96	496	368	28	40	41
29....	25	21	....	....	....	....	103	565	385	27	38	41
30....	25	22	....	....	....	....	116	549	485	22	37	40
31....	25	....	....	....	....	....	....	530	....	21	42	....
Total	915	661	....	....	....	....	1193	6882	13527	3004	722	1204
Mean..	29.5	22.0	....	....	....	....	62.8	222	451	96.9	23.3	40.1
Max..	40	26	....	....	....	....	116	565	580	375	42	81
Min..	25	19	....	....	....	....	26	76	244	21	15	28
Acre-ft.	1810	1310	....	....	....	....	2370	13650	26830	5960	1430	2390

Total run-off for period=55,750 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Laramie River Near Jelm, Wyoming, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	54	58	44	24	26	28	40	107	755	208	85	39
2....	49	54	37	23	26	28	44	107	618	154	75	39
3....	46	46	33	22	26	30	52	95	688	131	69	39
4....	46	69	28	21	26	28	65	97	740	119	67	42
5....	46	64	26	21	26	29	75	124	639	122	61	38
6....	55	61	25	22	25	30	60	157	506	113	60	38
7....	52	58	25	22	24	32	56	200	450	105	60	41
8....	48	55	27	23	23	35	54	255	450	107	56	38
9....	48	50	28	24	23	38	50	316	423	107	54	34
10....	46	52	27	24	24	40	62	500	370	107	50	34
11....	45	56	27	25	23	42	75	512	355	321	46	34
12....	45	60	27	27	23	43	110	423	396	340	46	36
13....	45	61	28	26	24	42	98	340	345	401	46	35
14....	45	58	28	25	24	40	120	445	350	233	45	35
15....	45	60	29	25	24	39	140	599	396	152	42	34
16....	48	61	30	25	25	40	167	618	380	124	48	34
17....	48	58	29	24	26	41	162	599	412	111	60	33
18....	46	64	27	24	25	42	158	639	412	111	61	33
19....	46	58	27	24	25	42	150	639	380	103	55	33
20....	56	55	26	23	25	41	170	560	340	94	49	32
21....	61	52	26	23	26	41	180	500	340	90	43	31
22....	61	50	27	23	26	42	194	467	335	83	39	32
23....	56	50	29	23	26	43	170	530	321	78	36	34
24....	56	49	31	24	27	43	155	489	260	77	39	42
25....	54	58	30	24	28	42	130	554	264	77	39	42
26....	56	58	29	25	28	40	119	536	445	80	39	39
27....	54	52	27	25	28	40	149	489	269	94	36	38
28....	55	50	26	24	28	40	128	512	208	95	35	36
29....	50	47	26	23	....	39	117	566	176	92	36	34
30....	52	48	25	24	....	38	109	786	172	87	42	34
31....	60	....	24	24	....	39	....	674	....	88	41	....
Total	1574	1672	878	736	710	1177	3359	13435	12195	4204	1560	1083
Mean.	50.8	55.7	28.3	23.7	25.4	38.0	112	433	406	136	50.3	36.1
Max..	61	69	44	27	28	43	194	786	755	401	85	42
Min..	45	46	24	21	23	28	40	95	172	77	35	31
Acre-ft.	3120	3320	1740	1460	1410	2330	6660	26650	24190	8340	3090	2150

Total run-off for water year 1936-37=84,460 acre-feet.

Discharge of Laramie River Near Jelm, Wyo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	35	48	29	27	*37	46	50	348	1300	677	70	69
2....	41	48	30	28	37	54	54	353	1320	494	64	94
3....	41	46	31	*28	37	62	60	383	1380	405	60	188
4....	38	45	32	28	38	70	66	310	1420	343	56	117
5....	38	43	32	28	39	74	67	260	1390	287	52	94
6....	39	46	31	28	40	66	62	208	1400	251	52	80
7....	41	43	31	27	40	62	67	184	1390	227	52	80
8....	45	46	31	26	39	62	80	172	1330	215	52	72
9....	46	52	31	25	38	62	75	157	1250	194	56	70
10....	46	48	31	24	38	60	67	157	1200	184	66	67
11....	46	41	32	24	38	58	64	149	1080	175	64	74
12....	45	39	33	24	38	62	60	146	1040	166	55	107
13....	45	39	33	25	39	66	69	172	1050	160	50	122
14....	45	40	32	25	40	80	78	314	1060	166	54	107
15....	45	41	32	25	40	82	75	438	764	172	56	85
16....	54	37	32	26	40	82	77	896	700	175	56	77
17....	52	36	31	27	40	80	90	1060	789	191	52	72
18....	61	35	30	29	40	74	101	984	888	197	45	67
19....	58	34	29	29	40	76	135	838	854	169	41	64
20....	54	35	26	30	40	80	109	716	748	157	38	61
21....	51	37	25	31	40	80	99	640	789	149	36	58
22....	52	38	25	32	40	80	103	632	1150	133	26	58
23....	54	37	25	33	39	78	124	564	1270	113	41	58
24....	58	35	25	34	39	72	131	669	871	105	43	56
25....	61	35	26	34	39	66	149	805	756	99	54	56
26....	58	33	27	35	40	60	184	975	708	99	74	60
27....	54	32	27	35	41	54	175	1120	700	95	78	62
28....	54	30	27	35	42	52	160	1240	640	88	74	62
29....	49	29	27	36	....	48	160	1420	632	85	67	62
30....	48	29	28	36	....	46	204	1470	724	80	62	62
31....	48	....	28	36	....	45	....	1280	....	75	69	....
Total	1504	1177	909	910	1098	2039	2995	19060	30593	6126	1725	2361
Mean.	48.4	39.2	29.3	29.4	39.2	65.8	99.8	615	1020	198	55.6	78.7
Max..	61	52	33	36	42	82	204	1470	1420	677	78	188
Min..	35	29	25	24	37	45	50	146	632	75	36	56
Acre-ft.	2980	2330	1800	1800	2180	4040	5940	37800	60680	12150	3420	4680

Total run-off for water year 1937-38=139,800 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

ARKANSAS RIVER BASIN

ARKANSAS RIVER AT GRANITE, COLORADO

Location—Water stage recorder in Sec. 31, T. 11 S., R. 79 W., at Granite just above mouth of Cache Creek.

Drainage Area—431 square miles. Zero of gage is 8,915.72 feet above mean sea level.

Records Available—May 1, 1897, to September 10, 1899; April 6, 1910, to September 30, 1938.

Maximum discharge observed during period 1897-99, 1910-1938; 2,900 second feet, June 16, 1924. Gage height 4.57 feet.

Maximum Discharge—Year 1937; 1,820 second feet, May 30, 1937. Gage height 3.94 feet.

Maximum Discharge—Year 1938; 2,320 second feet, June 6, 1938. Gage height 5.45 feet.

Accuracy—Records considered good. Records for period of ice effect December 13, 1936, to March 15, 1937, computed on basis of four discharge measurements and comparison of records at Salida, and those for ice effect period January 8 to March 10, 1938, computed on basis of two discharge measurements, weather records, and are fair.

Diversions for storage and irrigation above station. Sugar Loaf and Twin Lakes reservoirs on tributaries above station, total capacities 72,120 acre feet. Ewing Ditch, Buske-Ivanhoe Tunnel, Twin Lakes Tunnel and Fremont Pass Ditch bring water from Colorado River basin to Arkansas River above station. Total diversions for 1937, 44,610 acre feet and 58,510 acre feet in 1938.

Ditch or Tunnel	Diverts from Stream	Diversions in Acre Feet	
		1937	1938
Buske-Ivanhoe Tunnel.....	Frying Pan River.....	5,150	5,560
Columbine Ditch	Eagle River.....	1,280	1,800
Ewing Ditch.....	Eagle River.....	3,400	1,410
Wurtz Ditch.....	Eagle River.....	1,750	2,610
Fremont Pass	Ten Mile River.....	1,110	1,670
Twin Lakes.....	Roaring Fork.....	31,920	45,460
Total		44,610	58,510

ARKANSAS RIVER AT SALIDA, COLORADO

Location—Water stage recorder in Sec. 31, T. 50 N., R. 9 E., at Salida. South Arkansas River enters 3 miles below. Prior to December 3, 1936, station located 1½ miles downstream. Records comparable.

Drainage Area—1,210 square miles. Zero of gage is 7,052.34 feet above mean sea level.

Records Available—April 11, 1895, to October 31, 1903; November 3, 1909, to September 30, 1938.

Maximum discharge observed during period 1895-1903, 1909-1938; 5,100 second feet, June 16, 1924. Gage height 7.2 feet, former site and datum.

Maximum Discharge—Year 1937; 2,400 second feet, June 26, 1937. Gage height 3.56 feet.

Maximum Discharge—Year 1938; 3,930 second feet, July 14, 1938. Gage height 4.62 feet.

Accuracy—Records considered good in 1937 and excellent in 1938.

Diversions for storage and irrigation above station. Flow regulated by storage in Clear Creek Reservoir, capacity 11,444 acre feet, and as described under Arkansas River at Granite, Colorado.

ARKANSAS RIVER AT CANON CITY, COLORADO

Location—Water stage recorder in Sec. 32, T. 18 S., R. 70 W., in Canon City, just above mouth of Sand Creek and $\frac{1}{4}$ mile above Southern Colorado Power Plant.

Drainage Area—3,090 square miles. Zero of gage is 5,343.87 feet above mean sea level.

Records Available—May 1, 1888, to September 30, 1938.

Maximum discharge observed during period 1888-1938; 19,000 second feet, August 2, 1921. Gage height 10.7 feet. Rating curve extended above 4,000 second feet.

Maximum Discharge—Year 1937; 9,850 second feet, August 29, 1937. Gage height 6.35 feet. Rating curve extended above 4,000 second feet.

Maximum Discharge—Year 1938; 4,810 second feet, August 11, 1938. Gage height 5.58 feet.

Accuracy—Records considered good except those for period of ice effect January 8 to February 18, 1937, which were computed on basis of records for station at Salida, and weather records, and are fair.

Diversions for irrigation above station. Grape Creek enters from south one mile above station.

ARKANSAS RIVER NEAR PUEBLO, COLORADO

Location—Water stage recorder in Sec. 34, T. 20 S., R. 65 W., at South Side Water Works Intake, 4 miles west of center of Pueblo. Both South Side and North Side Water Works divert above station.

Nearest Tributary—Dry Creek enters below station.

Drainage Area—4,730 square miles. Zero of gage is 4,689.82 feet above mean sea level.

Records Available—May 1, 1885 to September 30, 1887; September 19, 1894, to September 30, 1938. A station was maintained 9 miles above Pueblo in 1887 and 1889.

Maximum discharge observed during period 1885-87, 1894-1938; 103,000 second feet (slope measurement, including estimated discharge of Dry Creek, 19,500 second feet) June 3, 1921. Gage height 24.66 feet from gage at Pueblo.

Maximum Discharge—Year 1937; 9,300 second feet, August 29, 1937.

Maximum Discharge—Year 1938; 11,100 second feet, August 26, 1938. Gage height 6.80 feet.

Accuracy—Records considered good except those estimated for period of ice effect January 6 to February 13, 1937, which are poor, and those for September 16-18, 1937, fair, and for period of ice effect December 9, 10, 15, 19-20, 23-26, 1937, January 8, 9, 10, 1938, January 26 to February 1, February 2-14, 16-18, 1938, estimated from reports and weather records, which are fair.

Diversions for irrigation above station. The North Side Water Works diverts considerable water around station, wasting the major portion back to river. Records include diversions above station by intake to North Side Waterworks.

ARKANSAS RIVER NEAR NEPESTA, COLORADO

Location—Water stage recorder in Sec. 31, T. 21 S., R. 60 W., above Oxford Farmers Canal Dam, $1\frac{1}{4}$ miles west of Nepesta. Records corrected for Oxford Farmers Canal waste 1918-26; not corrected from 1927 to June, 1936. Since June, 1936, records include all river flow above Oxford Farmers Dam.

Drainage Area—9,130 square miles.

Records Available—September 8, 1897, to October 31, 1903; July 14, 1909, to November 12, 1912; January 1, 1914, to September 30, 1938. From 1918 to June 4, 1921, station maintained at Nepesta.

Maximum discharge observed during period 1897-1903, 1909-12, 1914-1938; 180,000 second feet (by slope area measurement at point 9 miles upstream), June 4, 1921.

Maximum Discharge—Year 1937; 8,060 second feet, August 31, 1937. Gage height 5.37 feet.

Maximum Discharge—Year 1938; 9,380 second feet, September 4, 1938. Gage height 5.72 feet.

Accuracy—Records considered good except for period of ice effect January 1 to February 8, 1937, computed on basis of one discharge measurement and records at Pueblo, and for ice effect period January 8, 1938, January 24-27, and those estimated April 25, May 4-5, 1938, June 16, July 25-27, August 1-2, 5-6, from gage readers reports, and are fair.

Diversions for irrigation and storage above station.

ARKANSAS RIVER AT LA JUNTA, COLORADO

Location—Water stage recorder in Sec. 2, T. 24 S., R. 55 W., at East Bridge, in La Junta, just above mouth of King Arroya. This station has been maintained at several different locations at La Junta, during period of record, and all records are comparable.

Drainage Area—12,200 square miles. Altitude, 4,052 feet above mean sea level.

Records Available—May to August, 1889; December, 1893, to December, 1895; January to December, 1901; April to October, 1903; August to November, 1908; April, 1912, to September 30, 1938.

Maximum discharge observed during period 1889, 1893-95, 1901, 1903, 1908, 1912-1937; 200,000 second feet (slope area measurement), June 4, 1921. Gage height 18.4 feet.

Maximum Discharge—Year 1937; 21,800 second feet, June 1, 1937. Gage height 7.20 feet.

Maximum Discharge—Year 1938; 13,450 second feet, September 4, 1938. Gage height 6.22 feet.

Accuracy—Records considered good except those for period of ice effect December 20, 27, 1936, January 6 to February 1, 1937, computed on basis of one discharge measurement and weather records, and those computed on basis of two gage readings per day by observer for period December 31, 1937, to January 17, 1938, and are fair.

Diversions for storage and irrigation above station.

ARKANSAS RIVER AT CADDOA, COLORADO

Location—Water stage recorder in Sec. 7, T. 23 S., R. 49 W., $\frac{1}{2}$ mile north of Caddoa and just below highway bridge.

Drainage Area—19,000 square miles. Zero of gage is 3,760.23 feet above mean sea level.

Records Available—February 7 to September 30, 1938.

Maximum discharge observed during period 11,800 second feet, July 18, 1938. Gage height 5.85 feet.

Accuracy—Records considered good.

Diversions for irrigation and storage above station.

ARKANSAS RIVER AT LAMAR, COLORADO

Location—Water stage recorder in Sec. 30, T. 22 S., R. 46 W., at highway bridge 1 mile north of Lamar. Lamar Canal diverts mile above station and at times wastes water to river $\frac{1}{4}$ mile below station.

Drainage Area—19,800 square miles. Zero of gage is 3,606.02 feet above mean sea level.

Records Available—May 11, 1913, to September 30, 1938.

Maximum discharge observed during period 1913-1938; 165,000 second feet (slope area measurement) June 5, 1921.

Maximum Discharge—Year 1937; 12,100 second feet, June 1, 1937. Gage height 6.00 feet.

Maximum Discharge—Year 1938; 8,900 second feet, September 5, 1938. Gage height 5.48 feet.

Accuracy—Records considered good except those for period of ice effect December 17, 1936, to February 4, 1937, computed on basis of one discharge measurement, weather records and estimates by observer and are fair, and those for period of ice effect December 14-26, 29-31, 1937, January 1-10, 12-15, 27-31, 1938; February 1-2, 17-20, 1938, computed on basis of five discharge measurements and weather records. May 16-19, 1938, estimated from daily gage heights.

Diversions for irrigation above station.

ARKANSAS RIVER AT HOLLY, COLORADO

Location—Water stage recorder in Sec. 14, T. 23 S., R. 42 W., just above mouth of Wild Horse Creek, 300 feet below highway bridge and $\frac{1}{2}$ mile south of Holly.

Nearest Tributary—Two Buttes Creek enters $1\frac{1}{4}$ mile upstream.

Drainage Area—25,000 square miles. Altitude, 3,387 feet above mean sea level.

Records Available—October 15, 1907, to September 30, 1938.

Maximum discharge observed during period 1907-1938; 136,000 second feet (slope measurement), October 20, 1908. Gage height 11.0 feet, former datum.

Maximum Discharge—Year 1937; 17,300 second feet, September 8, 1937. Gage height 6.26 feet.

Maximum Discharge—Year 1938; 13,100 second feet, July 19, 1938. Gage height 5.80 feet.

Accuracy—Records considered good in 1937 and fair in 1938. For period of ice effect December 28, 1936, to February 4, 1937, computed on basis of one discharge measurement, weather records, and observers notes, and are fair. Records estimated January 23-25, 1938, March 1, June 5-8, 26 to July 2, 1938, from gage reader's daily gage heights.

Diversions for irrigation above station.

SOUTH ARKANSAS RIVER NEAR SALIDA, COLORADO

Location—Water stage recorder in Sec. 5, T. 49 N., R. 9 E., $\frac{3}{4}$ mile above mouth and $1\frac{1}{4}$ miles southwest of Salida.

Drainage Area—208 square miles. Altitude, 7,038 feet above mean sea level.

Records Available—April 1, 1922, to December 31, 1924; June 9, 1929, to September 30, 1938. From April, 1922, to December, 1924, station maintained $\frac{1}{2}$ mile downstream.

Maximum daily discharge observed during period 1922-24, 1929-38; 1,220 second feet June 17, 1923.

Maximum Discharge—Year 1937; 269 second feet, May 16, 1937. Gage height 2.87 feet.

Maximum Discharge—Year 1938; 316 second feet, May 29, 1938. Gage height 3.27 feet.

Accuracy—Records considered good except those for period of ice effect December 30, 1936, to February 11, 1937, which were computed on basis of two discharge measurements and weather records, and are fair, and those during ice effect January 21-28, February 18-21, 1938, computed on basis of weather records, and are fair.

Diversions for irrigation above station.

GRAPE CREEK NEAR WESTCLIFFE, COLORADO

Location—Water stage recorder in Sec. 36, T. 21 S., R. 73 W., at weir 1 mile above DeWeese Dye Reservoir, and three miles northwest of Westcliffe.

Drainage Area—346 square miles. Altitude, 7,800 feet above mean sea level.

Records Available—December 1, 1924, to June 30, 1928; March 25, 1930, to September 30, 1938.

Maximum discharge observed during period 1924-28, 1930-38; about 1,400 second feet, July 22, 1930. Gage height 4.60 feet (computed by weir formula, with overflow estimated).

Maximum Discharge—Year 1937; 339 second feet, May 30, 1937. Gage height 2.35 feet.

Maximum Discharge—Year 1938; 236 second feet, June 8, 1938. Gage height 1.97 feet.

Accuracy—Records considered good except those estimated for November 10, 11, 1936, April 1-7, 1937, which are fair. No records November 13, 1936, to March 31, 1937, and November 11, 1937, to March 9, 1938.

Diversions for irrigation above station.

ST. CHARLES RIVER AT SAN ISABEL, COLORADO

Location—Water stage recorder in Sec. 12, T. 24 S., R. 69 W., at 10' rectangular weir above highwater of Lake Isabel, $\frac{3}{4}$ miles southwest of San Isabel.

Drainage Area—18.8 square miles.

Records Available—April 1, 1937, to September 30, 1938.

Complete records furnished by U. S. Forest Service.

HUERFANO RIVER AT MANZANARES CROSSING NEAR REDWING, COLORADO

Location—Water stage recorder in Sec. 5, T. 27 S., R. 71 W., at Manzanares Crossing, $3\frac{1}{2}$ miles southwest of Redwing. Datum lowered 0.50 foot on March 16, 1937.

Drainage Area—76 square miles.

Records Available—July 14, 1923, to September 30, 1938. No winter records prior to 1936.

Maximum discharge observed during period 1923-38; discharge not determined July 27, 1934. Gage height 4.80 feet.

Maximum Discharge—Year 1937; 428 second feet, from rating curve extended above 140 second feet, August 17, 1937. Gage height 1.90 feet.

Maximum Discharge—Year 1938; 272 second feet, June 13, 1938. Gage height 1.57 feet.

Accuracy—Records considered good except those for period of ice effect December 2, 1936, to March 15, 1937, computed on basis of four discharge measurements and weather records, and those for period of ice effect November 19-24, 1937, November 27 to December 1, 4-9, Dec. 14, 1937, to March 10, 1938, computed on basis of seven discharge measurements, weather records, and are fair.

Diversions for irrigation above station.

HUERFANO RIVER AT BADITO, COLORADO

Location—Water stage recorder in Sec. 4, T. 27 S., R. 68 W., at concrete highway bridge on Highway 69 at Badito. South Owl Creek, an intermittent stream, enters a short distance upstream. Station maintained at this site 1912, 1923-25.

Drainage Area—519 square miles.

Records Available—August 28 to November 30, 1912; April 1, 1923, to September 30, 1925; March 6 to September 30, 1938.

Maximum Discharge—Year 1938; 689 second feet, August 11, 1938. Gage height 4.83 feet.

Accuracy—Records considered fair. Records for period March 4 to December, 1938, from chain gage readings.

Diversions for irrigation above station.

HUERFANO RIVER NEAR UNDERCLIFFE, COLORADO

Location—Water stage recorder in Sec. 21, T. 23 S., R. 63 W., at mouth of canyon 600 feet above diversion dam for Huerfano Valley ditch, and $5\frac{1}{2}$ miles southwest of Undercliffe.

Drainage Area—1,702 square miles.

Records Available—May 16 to September 30, 1938.

Maximum discharge observed during period 1938; 11,000 second feet, June 7, 1938. Gage height 5.91 feet.

Accuracy—Records considered fair except those below 200 second feet which are poor. Records for periods May 22, 24-29, June 12 to July 14, August 22-28, computed on basis of four discharge measurements and estimates by Water Commissioner.

Diversions for storage and irrigation above station.

CUCHARAS RIVER AT BOYD RANCH NEAR LA VETA, COLORADO

Location—Water stage recorder in Sec. 24, T. 30 S., R. 69 W., 6 miles south of La Veta.

Drainage Area—75 square miles.

Records Available—January 1, 1923, to September 30, 1938. Prior to October, 1934, station located 2 miles downstream. Records not comparable.

Maximum discharge observed during period 1935-38; 291 second feet, June 3, 1937. Gage height 2.43 feet.

Maximum Discharge—Year 1937; 291 second feet, June 3, 1937. Gage height 2.43 feet.

Maximum Discharge—Year 1938; 185 second feet, July 14, 1938. Gage height 2.03 feet.

Accuracy—Records considered good except for ice period December 1, 1936, to March 14, 1937, computed on basis of five discharge measurements and weather records, and those for period of ice effect February 20 to March 5, 1938 (computed on basis of one measurement and weather records, record of Huerfano River at Redwing), and during period unreliable gage heights May 26 to June 25, 1938 (computed on basis two discharge measurements), and are fair.

Diversions for irrigation above station.

APISHAPA RIVER AT AGUILAR, COLORADO

Location—Water stage recorder in Sec. 34, T. 30 S., R. 65 W., on southwest edge of Aguilar at Pitti ranch. Gonzales Canyon, an intermittent stream, enters two miles downstream.

Drainage Area—149 square miles.

Records Available—April 1 to September 30, 1938.

Maximum discharge observed during period 1938; 5,260 second feet (slope area method), August 10, 1938. Gage height 14.32 feet.

Accuracy—Records considered fair.

Diversions for irrigation above station.

PURGATOIRE RIVER AT TRINIDAD, COLORADO

Location—Water stage recorder in Sec. 13, T. 33 S., R. 64 W., at foot of State Street, in Trinidad. Stations maintained at various sites, but records are comparable.

Drainage Area—742 square miles. Altitude, 5,990 feet above mean sea level.

Records Available—May, 1896, to July, 1899; August to December, 1905; November, 1906, to March, 1907; October, 1907, to November, 1912; April, 1916, to September 30, 1938.

Maximum discharge observed during period 1896-99, 1905, 1906-12, 1916-1938; 45,400 second feet, September 30, 1904. Gage height 16.6 feet from Commercial Street gage.

Maximum Discharge—Year 1937; 15,000 second feet (slope area method), August 30, 1937. Gage height 9.48 feet.

Maximum Discharge—Year 1938; 14,750 second feet (slope area method), June 4, 1938. Gage height 9.50 feet.

Accuracy—Records considered good except for ice effect period December 2-15, 19-25, 1936, December 27 to February 5, 1937, February 10-12, 17, 26-27, and November 23, 26-30, December 14-17, 25-31, 1937, January 1, 4-5, 1938, February 7, 25-26, computed on basis of three discharge measurements and weather records, and those for September 11-30, 1937.

Diversions for irrigation above station.

PURGATOIRE RIVER AT NINE MILE DAM NEAR
HIGBEE, COLORADO

Location—Water stage recorder in Sec. 32, T. 26 S., R. 54 W., 700 feet above Nine Mile Dam, 4 miles southwest of Higbee and 15 miles south of La Junta. Smith Canon enters four miles below station.

Drainage Area—2,900 square miles.

Records Available—October, 1924, to September 30, 1938.

Maximum discharge observed during period 1924-38; 64,500 second feet, September 15, 1934, by slope area method. Gage height 12.60 feet.

Maximum Discharge—Year 1937; 10,000 second feet, July 18, 1937. Gage height 6.00 feet. Curve extended above 4,400 second feet.

Maximum Discharge—Year 1938; 8,050 second feet, August 11, 1938. Gage height 5.70 feet.

Accuracy—Records considered good except those for ice effect periods December 2, 1936, to February 12, 26-27, 1937, March 14-16, 1937, and December 14-25, December 28, 1937, January 4, 1938, January 6-8, 11, 13, 24-25, 27-31, February 1, 16-19, 22, April 7-8, 1938, which were computed on basis of discharge measurements and weather records, and are fair.

Discharges for June 18, 19, 24, 25, July 10-17, July 24 to August 12, August 15-20, 22-25, 28, 29, September 17-30, October 6-13, 1937, and for April 18 to May 5, May 15-21, May 27 to June 1, July 3-14, 24-27, August 1-4, 8-9, 18-31, September 24-30, 1938, measured through a Parshall flume.

Diversions for irrigation above station.

PURGATOIRE RIVER AT HIGHLAND (CARMEN) DAM NEAR LAS ANIMAS, COLORADO

Location—Water stage recorder in Sec. 1, T. 25 S., R. 53 W., above Highland Ditch diversion; dam situated 11 miles southwest of Las Animas. Tarbox Arroya enters $\frac{1}{4}$ mile below station.

Drainage Area—3,320 square miles.

Records Available—October 1, 1931, to September 30, 1938.

Maximum discharge observed during period 1931-38; 33,000 second feet, by slope area method, September 15, 1934. Gage height 14.00 feet.

Maximum Discharge—Year 1937; 10,600 second feet, September 6, 1937. Gage height 7.00 feet.

Maximum Discharge—Year 1938; 9,730 second feet, July 18, 1938. Gage height 6.18 feet.

Accuracy—Records considered good except those for periods of ice effect December 28, 1936, to February 10, 1937, December 8, 9, 25, 26, 1937, January 24, 25, 1938, January 30-31, which were computed on basis of two discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

HOLLY DRAIN NEAR HOLLY, COLORADO

Location—Water stage recorder in Sec. 16, T. 23 S., R. 41 W., 100 yards west of Colorado-Kansas State Line, where Santa Fe R. R. crosses Drain. Cheyenne Creek enters just above station.

Altitude—3,385 feet above mean sea level.

Records Available—January 1, 1924, to September 30, 1938.

Maximum discharge observed during period 1924-38; 1,470 second feet, September 3, 1938. Gage height 10.29 feet.

Maximum Discharge—Year 1937; 158 second feet, September 4, 1937. Gage height 6.10 feet.

Maximum Discharge—Year 1938; 1,470 second feet, September 3, 1938. Gage height 10.29 feet.

Accuracy—Records considered good in 1937 except those for periods of ice effect, January 3, 1937, January 13 to February 4, February 9-12, 1937, computed on basis of one discharge measure-

ment and weather records, and are fair. Records considered fair in 1938, ice periods December 14 to 17, 1937, January 14, 24-26, 30-31, February 16-23, 1938, computed on basis of one discharge measurement and weather records. Discharge estimated October 31 to November 8, 1937. Since August 28, 1935, due to change of channels caused by cloudbursts, records include flow of Wild Horse Creek but not flow of that part of Holly Drain west of Wild Horse Creek.

Discharge of Arkansas River at Granite, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	144	121	156	61	54	74	82	136	1110	1140	395	183
2.....	136	108	141	60	56	76	94	141	673	1060	395	172
3.....	134	87	139	56	58	78	88	158	436	770	405	189
4.....	130	101	112	58	60	78	82	183	448	743	400	204
5.....	127	103	74	60	62	78	77	261	497	664	420	204
6.....	136	101	70	60	61	82	77	264	453	649	405	198
7.....	127	105	76	62	62	86	74	322	514	657	380	127
8.....	125	101	79	62	60	90	74	405	869	642	366	116
9.....	119	101	84	62	58	88	74	431	797	572	370	136
10.....	119	101	80	60	56	86	84	797	770	542	357	156
11.....	114	99	87	60	58	88	97	779	788	542	335	136
12.....	112	103	76	59	60	90	101	797	878	627	335	130
13.....	116	103	70	59	62	90	116	851	682	584	326	123
14.....	119	103	66	58	62	90	151	952	453	566	314	114
15.....	116	101	62	58	60	90	257	1160	605	524	306	112
16.....	116	105	62	58	61	90	306	1340	752	497	298	112
17.....	114	103	66	58	62	82	254	1320	824	514	306	112
18.....	112	108	67	56	64	74	233	1400	770	734	348	112
19.....	110	97	66	56	64	79	508	1440	779	690	310	121
20.....	119	94	65	58	62	74	508	1240	824	717	243	127
21.....	121	97	64	58	64	72	590	1110	914	657	213	123
22.....	114	94	65	56	66	90	649	1040	1130	572	204	125
23.....	116	92	64	56	68	79	605	1080	1340	536	195	132
24.....	103	85	62	58	68	73	514	806	1230	524	144	134
25.....	112	87	60	59	67	73	247	620	1300	524	156	130
26.....	116	87	60	58	68	70	233	673	1690	370	172	125
27.....	119	85	60	56	70	72	219	717	1380	395	164	119
28.....	119	82	60	56	73	72	195	752	1200	410	169	116
29.....	108	85	60	55	.....	127	166	942	1170	442	192	114
30.....	112	114	60	54	.....	123	146	1640	1170	400	223	116
31.....	121	.....	61	54	.....	119	.....	1280	.....	357	210	.....
Total	3706	2953	2374	1801	1746	2633	6901	25037	26446	18621	9056	4118
Mean.	120	98.4	76.6	58.1	62.4	84.9	230	808	882	601	292	137
Max.	144	121	156	62	73	127	649	1640	1690	1140	420	204
Min.	103	82	60	54	54	70	74	136	436	357	144	112
Acre-ft.	7350	5860	4710	3570	3460	5220	13690	49660	52450	36930	17960	8170

Total run-off for water year 1936-37=209,000 acre-feet.

Discharge of Arkansas River at Granite, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	127	105	92	76	72	76	77	460	1740	1380	898	443
2.....	125	101	92	80	71	80	86	387	1740	1120	918	462
3.....	123	99	97	94	71	85	66	387	1790	1140	937	382
4.....	130	101	94	87	71	90	88	363	2020	1030	951	283
5.....	169	97	88	70	70	95	95	354	2140	990	964	287
6.....	175	90	88	72	70	100	93	327	2070	1360	1010	283
7.....	175	101	88	68	70	105	88	254	1920	1310	1040	266
8.....	169	99	85	70	69	115	88	248	1260	1210	1020	287
9.....	112	90	88	70	69	125	90	259	1600	1290	964	259
10.....	116	94	90	70	69	130	99	276	1620	1130	990	232
11.....	112	99	92	72	69	106	99	312	1580	1100	744	280
12.....	112	99	88	76	68	102	112	312	1550	1110	467	298
13.....	110	92	87	77	68	104	130	309	1720	1320	443	229
14.....	105	88	85	76	68	102	139	357	1650	1380	428	211
15.....	121	99	82	76	68	97	122	434	1430	1380	405	232
16.....	127	97	85	76	66	106	120	526	1420	1130	386	239
17.....	123	141	82	75	66	106	137	557	1500	694	364	236
18.....	132	144	80	75	65	101	186	570	1830	645	391	229
19.....	127	141	82	75	65	92	306	630	1650	676	638	219
20.....	116	144	85	75	65	104	312	634	891	676	750	214
21.....	119	103	90	74	65	104	291	641	1390	473	756	211
22.....	119	99	92	74	65	92	294	688	2020	511	782	208
23.....	119	97	84	74	65	88	336	598	2020	462	762	205
24.....	110	123	76	74	65	95	342	553	1610	409	750	214
25.....	105	119	76	73	66	90	378	543	1510	377	750	208
26.....	101	108	79	73	68	84	390	609	1530	396	769	202
27.....	101	94	84	73	70	81	366	782	1540	592	872	197
28.....	103	94	84	73	72	84	378	1000	1380	615	763	194
29.....	101	94	84	72	.....	81	409	1320	1570	795	270	180
30.....	99	92	88	72	.....	75	441	1490	1700	931	328	166
31.....	101	.....	88	72	.....	84	.....	1600	.....	904	344	.....
Total	3784	3144	2675	2314	1906	2979	6158	17790	49391	28536	21854	7556
Mean.	122	105	86.3	74.6	68.1	96.1	205	574	1646	921	705	252
Max.	175	144	97	94	72	130	441	1600	2140	1380	1040	462
Min.	99	88	76	68	65	75	66	248	891	377	270	166
Acre-ft.	7510	6240	5310	4590	3780	5910	12210	35290	97970	56600	43350	14990

Total run-off for water year 1937-38=293,800 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Salida, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	447	422	304	251	212	205	208	227	1620	1540	677	372
2....	434	335	324	242	212	219	181	235	1220	1580	625	337
3....	422	297	320	208	219	216	191	275	1010	1260	617	332
4....	426	300	343	235	216	216	184	316	692	1150	632	366
5....	414	335	305	235	235	216	174	440	888	1050	632	372
6....	402	335	260	246	231	216	181	568	840	968	640	366
7....	398	331	270	246	235	235	174	603	776	1030	625	360
8....	383	314	265	256	212	251	168	792	1050	1040	596	284
9....	394	293	270	242	208	251	166	848	1080	960	561	289
10....	394	297	256	235	212	231	163	1100	1060	880	561	294
11....	387	304	251	231	238	223	181	1160	1080	808	547	289
12....	379	307	242	231	235	223	191	1140	1220	864	568	265
13....	371	310	246	227	227	223	201	1230	1190	888	582	260
14....	368	314	251	227	223	205	216	1350	928	904	575	246
15....	360	307	251	227	219	198	316	1570	952	856	561	238
16....	364	307	260	227	212	198	492	1710	1060	800	568	235
17....	353	307	275	223	216	205	520	1830	1230	752	540	235
18....	349	307	256	227	223	208	360	1850	1220	928	589	231
19....	349	300	256	219	227	205	526	1940	1220	952	640	231
20....	349	297	251	223	212	184	737	1820	1210	1040	540	238
21....	364	287	251	223	208	194	722	1700	1290	928	434	242
22....	356	275	256	198	223	194	792	1510	1420	856	427	246
23....	353	272	242	212	223	198	752	1660	1700	800	408	260
24....	346	254	238	219	219	171	684	1380	1580	792	348	270
25....	346	254	235	223	219	171	486	1120	1590	824	337	275
26....	353	245	246	223	219	174	332	1060	2020	714	360	256
27....	353	257	238	205	216	168	326	1040	1910	677	360	246
28....	349	263	242	205	208	174	305	1100	1620	760	343	238
29....	338	266	246	201	....	184	265	1260	1480	792	337	231
30....	414	263	238	205	....	227	201	1860	1500	768	384	235
31....	430	....	238	201	....	231	....	1810	....	684	414	....
Total	11745	8955	8126	6973	6159	6414	10395	36454	37666	28845	16028	8329
Mean.	379	298	262	225	212	207	346	1176	1256	930	517	278
Max.	447	422	343	256	238	251	792	1940	2020	1580	677	372
Min.	338	245	235	198	208	168	163	227	692	677	337	231
Acre-ft.	23300	17760	16120	13830	12220	12720	20620	72310	74710	57210	31790	16540

Total run-off for water year 1936-37=369,100 acre-feet.

Discharge of Arkansas River at Salida, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	248	223	233	206	230	226	182	588	2330	2190	1100	615
2....	268	220	233	213	233	226	175	555	2400	1830	1140	738
3....	260	223	244	223	223	230	182	575	2490	1620	1180	809
4....	252	220	244	230	226	230	192	548	2830	1540	1190	622
5....	276	216	237	230	226	226	196	516	3070	1380	1210	615
6....	331	206	240	223	216	260	196	480	3240	1640	1170	700
7....	308	196	240	209	209	268	186	430	2720	1760	1210	636
8....	317	203	233	220	226	272	179	357	1940	1540	1220	636
9....	289	196	233	220	223	272	179	362	2380	1680	1200	636
10....	240	189	240	216	223	240	179	368	2350	1500	1230	561
11....	240	192	256	216	223	220	182	404	2260	1500	1190	595
12....	237	196	260	220	226	226	189	420	2160	1440	730	685
13....	240	199	272	226	216	230	203	425	2480	1630	685	760
14....	237	199	264	226	206	233	233	458	2500	2200	700	602
15....	240	206	252	226	209	206	256	561	2240	2200	678	588
16....	256	289	248	226	213	209	233	738	2180	1810	650	602
17....	256	223	248	220	220	220	230	752	2210	1470	575	595
18....	260	260	240	226	206	216	260	785	2570	1350	529	555
19....	260	244	226	226	206	203	331	776	2520	1070	629	529
20....	244	248	213	220	230	206	394	801	1640	966	768	498
21....	237	244	213	220	213	206	368	793	1900	842	826	498
22....	237	213	223	223	216	189	394	834	2840	921	851	498
23....	240	209	220	226	209	172	409	752	3060	785	860	485
24....	240	220	226	213	209	175	430	715	2590	678	877	485
25....	230	230	230	199	206	172	425	678	2370	664	860	491
26....	226	226	213	209	209	186	468	776	2350	671	904	463
27....	230	216	223	220	213	179	463	975	2460	799	921	452
28....	226	230	216	226	220	182	452	1260	2200	895	948	441
29....	223	240	220	230	....	182	504	1720	2260	1050	575	425
30....	223	237	209	230	....	172	542	2020	2570	1140	458	378
31....	226	....	216	226	....	169	....	2160	....	1130	529	....
Total	7797	6613	7265	6844	6085	6603	8812	23582	73110	41891	27593	17193
Mean.	252	220	234	221	217	213	294	761	2440	1350	890	573
Max.	331	289	272	230	233	272	542	2160	3240	2200	1230	809
Min.	223	189	209	199	206	169	175	357	1640	664	458	378
Ac.-ft.	15490	13120	14410	13570	12070	13100	17480	46770	145000	83090	54730	34100

Total run-off for water year 1937-38=462,900 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Canon City, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	574	588	332	310	230	276	272	265	2070	1870	654	521
2....	534	594	396	301	230	280	261	257	1840	1950	623	350
3....	502	464	413	268	235	261	246	265	1350	1650	567	341
4....	489	413	453	276	245	249	261	297	1060	1360	554	318
5....	476	459	447	318	255	246	231	341	975	1240	574	359
6....	464	489	359	332	255	246	235	489	975	1080	560	332
7....	453	502	341	301	250	268	233	588	854	1020	588	332
8....	447	514	355	288	235	310	201	608	864	1050	554	605
9....	447	417	341	275	230	314	204	734	1070	996	521	272
10....	441	396	327	265	225	310	211	874	1020	924	489	246
11....	435	396	314	256	250	289	228	1080	1010	835	489	253
12....	424	424	323	250	250	301	246	1170	1070	787	495	249
13....	413	435	318	250	260	310	268	1280	1150	845	508	246
14....	407	430	332	250	265	314	293	1360	1030	854	527	231
15....	391	413	350	260	255	297	369	1460	914	826	508	218
16....	386	413	341	260	255	293	502	1760	996	751	502	214
17....	386	402	341	255	275	289	574	1910	1170	897	560	207
18....	380	402	318	250	280	375	601	2010	1220	787	534	201
19....	380	386	305	245	261	402	476	2180	1240	894	574	201
20....	369	364	301	245	265	305	669	2200	1250	914	567	207
21....	386	355	305	240	224	314	726	1940	1300	874	441	211
22....	396	364	318	235	297	280	751	1840	1380	787	364	207
23....	396	366	323	225	305	276	692	1880	1670	734	391	214
24....	386	314	318	230	293	265	646	1780	1700	726	332	214
25....	396	314	314	245	284	253	631	1460	1980	709	293	211
26....	430	336	310	245	257	265	447	1250	2040	734	305	218
27....	459	327	293	240	276	268	375	1150	2420	654	489	221
28....	464	323	310	235	310	265	364	1170	1940	709	332	204
29....	447	314	310	225	....	268	341	1250	1670	734	1190	198
30....	459	323	293	225	....	276	297	2070	1730	787	548	198
31....	547	....	284	230	....	297	....	2340	....	709	581	....
Total	13564	12237	10385	8030	7252	8962	11856	39258	40958	29687	16214	7999
Mean.	438	408	335	259	259	289	395	1266	1365	958	523	267
Max.	574	594	453	332	310	402	751	2340	2420	1950	1190	605
Min.	369	314	284	225	224	246	201	257	854	654	293	198
Acre-ft.	26900	24270	20600	15930	14380	17780	23520	77870	81240	58880	32160	15870

Total run-off for water year 1936-37=409,400 acre-feet.

Discharge of Arkansas River at Canon City, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	206	197	266	301	288	282	224	534	2570	2570	1010	650
2....	210	199	280	298	277	294	232	539	2750	2170	984	852
3....	215	186	298	328	288	294	242	508	2860	1880	1110	1240
4....	217	184	314	320	282	317	220	518	3060	1800	1080	1080
5....	222	166	310	317	274	277	234	464	3270	1510	1080	757
6....	224	164	310	314	268	282	250	478	3510	1560	1070	716
7....	237	155	328	294	250	288	227	469	3200	1760	1110	723
8....	242	155	317	285	244	285	224	442	2780	1620	1170	638
9....	250	161	314	307	250	288	224	438	2310	1640	1160	670
10....	234	163	335	320	257	288	229	394	2720	1590	1290	625
11....	203	164	343	320	252	255	222	390	2640	1540	1750	607
12....	203	163	343	317	255	247	220	410	2520	1520	955	696
13....	206	161	354	331	250	252	227	426	2630	1550	625	912
14....	203	161	354	331	239	268	234	406	2860	1790	607	690
15....	206	172	339	324	247	260	294	487	2580	2410	583	709
16....	210	188	347	304	238	227	317	663	2480	1970	566	716
17....	224	239	347	288	280	224	291	814	2460	1670	518	764
18....	227	224	331	285	291	227	277	792	2670	1590	478	703
19....	229	255	314	301	291	222	314	807	2810	1290	451	683
20....	229	277	301	280	320	210	402	860	2310	1040	600	657
21....	222	285	285	285	324	212	430	860	2580	965	696	644
22....	210	271	291	294	314	220	406	903	2780	912	736	663
23....	208	239	310	301	294	227	422	912	3200	837	770	594
24....	203	210	328	271	282	210	456	777	2940	730	764	583
25....	201	210	335	252	260	166	438	703	2550	657	770	561
26....	195	220	328	266	263	188	442	730	2570	625	869	524
27....	201	212	314	285	268	220	482	822	2720	644	974	503
28....	199	217	317	294	271	224	451	1240	2550	807	1020	478
29....	201	244	310	301	....	232	451	1750	2380	903	1040	513
30....	201	252	317	277	....	232	487	2300	2770	1000	534	550
31....	197	....	310	294	....	217	....	2410	....	1060	518	....
Total	6635	6094	9890	9285	7647	7635	9569	24246	82330	43610	26888	20701
Mean.	214	203	319	300	273	246	319	782	2740	1410	867	690
Max.	250	285	354	331	324	317	487	2410	3510	2570	1750	1240
Min.	195	155	266	252	239	166	220	390	2310	625	451	478
Acre-ft.	13160	12090	19620	18420	15170	15140	18980	48090	163300	86500	53330	41060

Total run-off for water year 1937-38=504,900 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River Near Pueblo, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	659	512	349	261	300	220	289	123	2140	1430	496	441
2....	642	591	377	310	330	220	267	97	1990	1550	466	348
3....	671	481	427	310	435	233	203	189	1360	1510	417	282
4....	577	423	459	299	390	207	222	179	898	1190	386	354
5....	536	425	466	299	442	207	245	187	718	976	441	664
6....	582	550	533	190	445	202	208	243	777	815	394	519
7....	517	497	412	140	395	207	226	403	802	722	417	440
8....	478	531	421	115	350	230	208	476	744	781	422	810
9....	471	487	413	90	285	297	187	650	963	760	400	259
10....	500	416	379	75	265	284	187	722	889	710	359	215
11....	502	422	381	218	290	241	187	1070	811	673	349	199
12....	480	467	377	215	320	221	235	1110	828	612	330	209
13....	433	473	296	241	345	252	235	1080	909	615	388	177
14....	413	447	274	242	390	279	262	1250	919	676	458	177
15....	430	470	259	267	337	273	307	1340	690	640	388	145
16....	384	445	271	316	354	268	477	1780	689	600	371	135
17....	397	449	267	316	387	241	619	2080	785	533	358	126
18....	394	455	288	240	327	246	591	2100	870	840	473	117
19....	382	455	280	265	300	362	469	2080	775	816	417	103
20....	383	430	304	237	287	315	485	2160	810	716	442	95
21....	432	385	321	237	263	256	582	1900	803	770	425	87
22....	499	426	324	235	244	233	582	1860	937	632	298	91
23....	455	397	317	235	329	186	695	1820	1150	564	285	91
24....	428	390	285	232	302	172	752	1800	1400	524	262	89
25....	383	364	293	229	267	177	628	1610	1380	571	186	117
26....	490	398	299	220	302	217	546	1390	1990	566	408	151
27....	476	419	296	262	284	217	278	1250	2180	510	1800	160
28....	445	441	283	265	285	213	245	1180	1820	506	404	140
29....	452	349	331	238	....	204	212	1370	1560	563	1420	120
30....	420	362	276	262	....	203	170	1580	1390	657	3080	118
31....	472	....	283	270	....	289	....	2220	....	608	744	....
Total	14783	13357	10541	7331	9250	7372	10799	37299	33977	23636	17482	6979
Mean.	477	445	340	236	330	238	360	1203	1133	762	564	233
Max.	671	591	533	316	445	362	752	2220	2180	1550	3080	810
Min.	382	349	259	75	244	172	170	97	689	506	186	87
Acre-ft.	29320	26490	20910	14540	18350	14620	21420	73980	67390	46880	34680	13840

Total run-off for water year 1936-37=382,400 acre-feet.

Discharge of Arkansas River Near Pueblo, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	141	180	255	244	272	206	157	436	2200	2470	986	1470
2....	137	216	247	227	283	207	176	620	2510	2030	856	1180
3....	144	230	231	245	257	207	163	578	2690	1740	953	3070
4....	145	225	246	246	263	224	156	578	2840	1710	1070	1400
5....	137	238	239	255	280	224	147	544	3200	1560	987	1000
6....	143	217	242	271	279	201	196	639	3520	1340	947	759
7....	199	198	240	253	249	217	208	738	3800	1670	973	739
8....	221	192	321	253	215	229	160	618	3100	1670	984	711
9....	220	188	190	252	209	234	157	514	2120	1470	1070	640
10....	229	197	191	302	198	227	139	554	2520	1560	1180	750
11....	176	191	388	354	182	200	137	539	2530	1410	2290	694
12....	152	200	326	395	187	168	126	539	2380	1340	1240	1210
13....	194	193	314	306	194	150	131	632	2560	1280	729	2450
14....	214	205	326	306	190	173	150	547	2740	1640	610	895
15....	209	206	325	276	191	175	347	508	2590	2390	582	833
16....	231	203	302	240	165	171	265	691	2360	2170	539	974
17....	253	243	313	229	150	142	246	901	2350	1980	487	743
18....	250	257	333	211	202	141	210	1010	2380	1460	422	679
19....	229	301	323	204	265	151	197	949	2790	1320	350	680
20....	231	286	296	211	250	136	279	889	2550	1280	420	668
21....	213	318	315	210	253	125	324	891	1520	1100	585	631
22....	213	303	292	230	235	129	293	987	2090	850	650	595
23....	199	276	287	193	225	160	306	854	2840	763	683	586
24....	193	280	263	217	226	134	373	773	2950	716	710	577
25....	197	263	292	215	231	106	331	635	3120	651	750	512
26....	172	267	296	180	207	120	284	556	2620	588	3210	497
27....	227	278	329	198	228	164	491	675	2370	647	1050	461
28....	176	266	288	220	218	176	475	811	2440	700	1210	439
29....	167	283	268	205	....	169	444	1420	2130	755	1290	425
30....	182	276	272	210	....	176	452	1840	2380	898	1100	488
31....	178	....	248	238	....	159	....	1920	....	1070	656	....
Total	5972	7176	8758	7596	6304	5401	7520	24467	78290	42228	29569	26765
Mean.	193	239	284	245	225	174	251	789	2610	1362	954	892
Max.	253	318	388	395	283	234	491	1920	3800	2470	3210	3070
Min.	137	180	190	180	150	106	126	436	1520	588	350	425
Acre-ft.	11850	14230	17450	15070	12590	10710	14920	48530	155300	83760	58650	53090

Total run-off for water year 1937-38=496,100 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River Near Nepesta, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	612	358	293	260	370	178	293	337	1070	918	493	1170
2....	648	430	316	320	380	242	275	220	828	1060	400	648
3....	636	530	387	340	335	332	279	275	1240	1070	381	540
4....	612	510	406	380	350	266	270	486	418	1120	381	560
5....	540	493	458	400	400	238	321	530	1090	1000	493	1820
6....	600	479	510	250	410	258	311	424	1070	879	254	800
7....	560	486	479	100	400	275	311	540	1110	720	254	861
8....	437	472	451	90	430	311	307	570	1190	732	262	3360
9....	424	510	444	80	465	342	254	780	1120	780	246	307
10....	387	458	424	50	266	369	224	840	944	756	224	486
11....	424	444	400	200	242	332	214	892	648	648	184	660
12....	486	437	387	180	418	293	201	892	648	612	181	540
13....	472	437	406	190	486	284	316	1060	624	684	214	246
14....	444	444	530	210	493	293	332	1170	744	600	254	181
15....	444	472	444	260	590	327	430	1260	828	672	230	152
16....	437	530	510	350	520	332	510	1620	866	560	173	160
17....	424	479	486	260	486	279	756	1990	792	560	181	140
18....	412	486	400	260	412	307	879	1730	918	1090	165	143
19....	406	420	307	260	364	358	816	1840	1060	465	284	122
20....	406	465	258	260	353	393	744	2030	1040	307	293	97
21....	375	520	224	280	279	298	510	1780	970	307	342	80
22....	430	590	234	270	327	262	458	1600	1020	288	270	85
23....	406	612	266	300	224	316	660	1690	1210	227	158	76
24....	381	648	307	300	321	242	590	1860	1260	217	195	73
25....	375	510	358	300	327	250	479	1650	1220	230	192	68
26....	418	418	424	290	192	275	437	1380	1630	238	184	82
27....	418	412	500	270	87	288	636	1190	1730	369	792	120
28....	375	430	493	330	127	275	387	1140	1290	381	792	138
29....	348	293	451	300	....	284	270	1140	1330	530	412	120
30....	375	258	510	350	....	288	298	2280	1140	458	3320	100
31....	353	....	510	340	....	275	....	2050	....	720	2630	....
Total	14063	14041	12573	8090	10034	9062	12768	37246	31048	19198	14874	13935
Mean.	454	468	406	261	358	292	426	1200	1030	619	480	464
Max..	648	648	530	400	590	393	879	2280	1730	1120	3320	3360
Min..	348	258	224	50	87	178	201	220	418	217	165	68
Acre-ft.	27900	27850	24940	16050	19900	17970	25320	73880	61580	38080	29500	27640

Total run-off for water year 1936-37=390,600 acre-feet.

Discharge of Arkansas River Near Nepesta, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	107	149	289	266	337	293	245	520	1690	2120	485	1140
2....	103	151	286	272	384	289	234	621	1600	1690	405	2120
3....	112	189	283	269	324	286	242	676	1640	1710	374	3510
4....	107	189	286	328	300	279	220	882	1910	1910	632	6150
5....	107	184	263	303	286	289	228	772	2150	1620	547	2100
6....	100	186	263	328	283	269	212	946	2350	1340	422	1360
7....	90	181	266	272	263	248	234	882	2850	1220	416	1560
8....	57	184	283	260	257	217	239	824	3990	1140	379	1200
9....	88	181	311	248	236	245	226	746	1670	914	405	898
10....	88	179	303	296	254	217	212	914	2220	962	389	772
11....	98	189	394	300	242	215	179	1050	2200	962	3290	1140
12....	134	169	394	311	223	272	184	898	1750	882	898	1580
13....	121	179	269	350	217	239	151	1140	1710	759	759	3940
14....	162	184	207	360	215	228	142	1030	1800	914	587	1260
15....	191	174	405	341	212	296	181	978	1730	2180	520	1180
16....	184	205	394	307	220	296	303	1440	1400	2380	492	1160
17....	217	220	266	257	251	279	293	1560	1260	1840	416	1200
18....	209	194	341	263	242	245	263	1840	1820	1600	394	709
19....	226	196	337	248	236	239	242	1820	1580	2320	300	978
20....	220	215	303	289	220	242	266	1500	2100	1730	242	866
21....	217	236	254	283	248	204	328	1500	1400	962	149	824
22....	207	311	226	276	365	194	332	1520	1560	1010	158	746
23....	199	394	251	248	296	204	286	866	2030	811	136	709
24....	169	341	374	245	296	228	283	1160	1870	798	151	643
25....	181	337	370	240	283	207	341	1050	1460	759	138	643
26....	189	316	355	245	289	202	374	914	2400	632	3460	643
27....	176	316	355	250	266	181	2150	837	1730	798	866	574
28....	199	337	245	263	263	209	837	962	2030	538	538	520
29....	162	303	226	228	....	223	601	1460	1750	898	914	485
30....	149	332	202	220	....	236	556	1980	2080	643	882	485
31....	142	....	260	316	....	251	....	1620	....	520	665	....
Total	4711	6921	9361	8682	7498	7522	10584	34908	57730	38562	20409	41095
Mean.	152	231	302	280	268	243	353	1126	1924	1244	658	1370
Max..	226	394	405	360	384	296	2150	1980	3990	2380	3460	6150
Min..	57	149	202	220	212	181	142	520	1260	520	136	485
Acre-ft.	9340	13730	18570	17220	14870	14920	20990	69240	114500	76490	40480	81510

Total run-off for water year 1937-38=491,900 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at La Junta, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	499	157	225	185	19	21	32	65	5050	309	144	124
2....	396	147	214	158	19	26	32	132	870	350	82	116
3....	379	202	231	175	21	53	23	58	455	474	82	235
4....	424	273	235	152	28	55	39	31	303	543	62	85
5....	362	121	152	151	52	51	61	69	135	481	78	1380
6....	480	92	73	54	31	31	46	122	177	398	91	2280
7....	523	88	50	30	34	26	118	103	508	312	25	837
8....	386	88	45	19	191	27	148	68	657	187	39	2880
9....	305	92	42	15	106	26	114	241	329	147	26	399
10....	279	105	36	19	100	33	42	251	418	162	34	144
11....	232	130	34	25	52	32	46	373	78	350	34	279
12....	221	146	47	31	29	32	30	454	46	138	32	364
13....	237	209	46	41	52	48	24	479	34	57	33	358
14....	208	203	53	36	22	116	48	491	19	52	33	356
15....	250	233	191	27	21	116	57	594	18	50	30	470
16....	280	254	198	35	25	112	112	663	20	87	28	175
17....	318	259	141	46	20	62	316	629	76	126	28	51
18....	285	263	88	34	21	38	548	646	220	260	32	38
19....	238	258	48	27	18	37	355	422	342	278	47	38
20....	243	251	36	21	19	70	309	402	439	84	44	38
21....	257	219	25	10	25	129	240	654	228	72	188	38
22....	277	225	22	16	37	69	162	378	261	54	27	30
23....	249	251	26	21	70	36	143	671	405	75	26	25
24....	225	228	22	32	85	41	409	625	577	33	33	24
25....	164	223	23	26	170	36	496	705	582	16	74	26
26....	154	218	28	24	64	24	307	621	847	20	112	26
27....	163	230	41	20	32	60	175	586	472	24	47	23
28....	223	222	100	17	24	62	195	592	316	70	263	19
29....	383	214	187	23	....	57	143	496	207	78	87	20
30....	393	213	182	18	....	44	84	811	459	25	698	22
31....	184	....	187	19	....	54	....	3790	....	32	766	....
Total	9217	5814	3028	1507	1387	1624	4854	16222	14548	5344	3325	10900
Mean.	297	194	97.7	48.6	49.5	52.4	162	523	485	172	107	363
Max..	523	273	235	185	191	129	548	3790	5050	543	766	2880
Min..	154	88	22	10	18	21	23	31	18	16	25	19
Acre-ft.	18280	11530	6010	2990	2750	3220	9630	32180	28860	10600	6600	21620

Total run-off for water year 1936-37=154,300 acre-feet.

Discharge of Arkansas River at La Junta, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	21	11	31	60	74	36	28	273	282	809	143	486
2....	20	11	61	99	109	71	55	118	440	619	74	331
3....	20	10	87	135	199	64	109	108	257	438	40	206
4....	17	11	77	150	150	55	179	133	416	639	22	7820
5....	16	19	99	146	130	48	45	247	825	567	30	1800
6....	16	48	76	145	90	37	28	532	114	614	62	350
7....	16	44	48	157	78	36	108	471	626	551	66	214
8....	16	34	61	244	46	134	464	463	3770	556	61	222
9....	16	37	48	291	20	183	253	486	516	571	36	114
10....	14	26	55	192	19	79	92	425	449	448	162	132
11....	13	19	260	160	14	16	31	383	740	488	677	293
12....	14	15	384	36	16	65	31	431	475	474	52	513
13....	14	21	339	36	21	178	19	459	248	440	43	1100
14....	16	14	59	44	16	16	25	351	655	333	410	481
15....	15	24	31	170	21	14	27	395	505	562	218	228
16....	26	16	72	204	33	19	28	436	136	643	79	238
17....	54	12	120	104	51	17	36	418	187	1370	41	569
18....	34	16	47	102	104	31	19	580	128	767	37	291
19....	90	19	40	106	231	87	27	596	588	467	69	167
20....	63	23	26	151	186	40	45	615	294	115	42	272
21....	55	50	22	181	144	13	34	566	104	767	32	324
22....	41	107	25	167	214	11	79	358	119	55	21	363
23....	29	173	90	172	302	18	40	24	612	114	19	350
24....	19	245	125	147	129	20	56	25	471	453	23	414
25....	15	160	142	153	56	20	53	290	544	492	24	490
26....	17	140	266	328	41	23	45	336	483	419	592	428
27....	20	140	272	196	40	27	149	238	336	361	1060	384
28....	21	156	118	101	31	26	853	292	590	416	232	354
29....	21	41	57	129	....	23	286	440	503	227	151	341
30....	14	25	47	103	....	26	225	730	692	337	419	302
31....	11	....	38	196	....	27	....	674	....	423	551	....
Total	774	1667	3223	4605	2565	1460	3469	11893	16105	15535	5488	19577
Mean.	25.0	55.6	104	149	91.6	47.1	116	384	537	501	177	653
Max..	90	245	384	328	302	183	853	730	3770	1370	1060	7820
Min..	11	10	22	36	14	11	19	24	104	55	19	114
Acre-ft.	1540	3310	6390	9130	5090	2900	6880	23590	31940	30810	10890	38830

Total run-off for water year 1937-38=171,300 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Caddoa, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....							45	205	388	576	344	480
2....							58	201	243	621	197	1190
3....							55	155	315	567	102	1180
4....							55	115	410	558	69	2340
5....						Mar. 7	76	147	356	540	61	5990
6....						to 31	76	261	540	472	70	1450
7....						51	50	612	388	540	74	888
8....						53	65	418	864	558	59	549
9....						89	213	368	1180	603	48	402
10....						110	144	338	506	594	44	305
11....						98	84	338	720	464	230	300
12....						69	53	356	912	448	960	320
13....						56	45	395	763	380	418	1220
14....						93	47	594	630	344	176	2160
15....						80	45	402	710	275	142	829
16....						50	47	432	829	514	131	480
17....						42	44	380	2100	1000	110	374
18....						44	40	388	1020	3280	89	700
19....						40	37	498	650	1610	87	368
20....						45	37	489	1270	1500	78	310
21....						42	38	549	660	3100	61	332
22....						35	45	621	275	1820	50	315
23....						37	40	1060	234	670	42	338
24....						35	41	852	514	489	48	332
25....						35	82	338	425	523	48	368
26....						33	89	315	498	506	50	480
27....						40	56	300	506	432	532	362
28....						51	167	270	380	332	630	300
29....						48	400	248	540	540	549	275
30....						50	252	315	455	455	498	248
31....						48		464		344	472	
Total						1374	2566	12424	19281	24655	6469	25185
Mean						55.0	85.5	401	643	795	209	840
Max.						110	440	1060	2100	3280	960	5990
Min.						33	37	115	234	275	42	248
Acre-ft.						2730	5090	24640	38240	48900	12830	49550

Total run-off during period=182,400 acre-feet.

Discharge of Arkansas River at Lamar, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.6	5.0	4.0	15	18	37	5.0	5.8	6800	3.8	18	789
2....	6.6	9.0	4.0	10	20	11	5.0	4.5	4530	4.6	8.3	305
3....	6.6	4.5	6.6	8	30	9.0	5.0	3.5	384	3.3	6.0	7.8
4....	6.6	4.5	3.5	10	26	5.8	2.5	4.0	520	3.8	6.4	343
5....	6.6	3.5	12	10	34	5.8	2.5	4.5	516	10	2.4	94
6....	5.8	15	63	10	33	5.8	2.5	4.0	111	7.4	2.2	3900
7....	4.5	3.5	77	10	33	5.8	2.5	4.5	50	9.9	1.7	3490
8....	21	3.0	20	6	80	5.0	2.5	4.5	17	12	1.7	879
9....	9.0	4.5	11	8	80	5.8	3.5	3.5	315	9.9	2.2	3450
10....	6.6	4.5	7.4	10	63	4.5	4.5	3.5	1090	8.8	2.4	492
11....	6.6	3.5	5.8	14	70	3.0	4.0	3.5	342	3.3	2.2	5.4
12....	9.0	4.0	5.0	18	95	4.0	6.6	4.0	41	3.3	2.2	15
13....	6.6	4.5	4.0	20	70	4.5	8.2	4.5	426	3.8	8.8	11
14....	6.6	4.0	4.0	22	72	3.5	7.4	5.8	85	3.8	2.8	6.9
15....	8.2	3.0	4.5	28	55	4.5	5.8	6.6	64	4.2	9.4	6.4
16....	5.8	3.5	4.0	28	35	4.5	5.8	5.8	6.4	4.2	18	4.6
17....	6.6	4.0	4.0	28	28	4.0	5.0	6.6	6.0	6.9	14	6.0
18....	6.6	4.0	3.0	30	28	3.5	3.5	8.2	5.6	6.0	6.4	5.6
19....	9.0	4.5	3.0	26	31	4.0	5.8	22	5.1	326	3.3	4.6
20....	3.5	5.0	3.0	23	28	2.0	5.0	9.8	5.1	68	3.1	4.2
21....	4.0	4.5	10	20	30	2.5	9.8	3.5	5.6	6.0	3.1	5.1
22....	4.5	4.0	8.0	18	24	2.5	12	4.5	4.6	4.6	11	4.6
23....	5.0	4.0	8.0	20	21	2.0	9.0	5.0	4.6	7.8	29	5.1
24....	5.0	4.5	8.0	24	11	3.0	8.2	9.0	4.6	10	13	4.6
25....	7.4	5.8	12	26	9.0	2.0	6.6	13	4.6	11	6.0	4.6
26....	5.8	5.8	13	28	24	2.5	5.0	12	4.6	12	6.9	5.6
27....	5.0	4.5	11	25	31	2.0	5.0	7.4	4.6	21	17	6.0
28....	4.5	3.5	9.0	25	16	9.8	5.8	19	10	9.9	21	4.6
29....	4.0	4.0	11	23		3.5	4.5	19	12	8.8	20	3.8
30....	6.6	4.0	11	23		2.5	5.0	12	4.2	21	48	3.3
31....	16		11	23		5.0		19		18	235	
Total	216.2	141.6	360.8	589	1095	170.3	163.5	242.5	15378.6	633.1	531.5	13915.4
Mean	6.97	4.72	11.6	19.0	39.1	5.49	5.45	7.82	513	20.4	17.1	464
Max.	21	15	77	30	95	37	12	22	6800	326	235	3900
Min.	3.5	3.0	3.0	6	9.0	2.0	2.5	3.5	4.2	3.3	1.7	3.3
Acre-ft.	429	281	716	1170	2170	338	324	481	30500	1260	1050	27600

Total run-off for water year 1936-37=66,320 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Lamar, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	3.8	2.2	2.2	7	3.0	4.8	3.3	2.4	28	3.8	4.3	4.8
2....	3.6	2.0	2.7	3	4.0	4.0	3.3	1.8	12	7.9	3.6	411
3....	3.2	2.0	2.8	3	34	3.8	2.8	1.8	7.5	4.0	3.6	509
4....	3.0	2.1	2.4	10	36	3.8	2.8	1.8	36	3.3	3.6	1480
5....	3.0	2.0	2.4	5	28	3.2	3.2	1.8	11	3.2	3.8	3550
6....	3.2	1.8	2.6	15	9.6	2.4	3.0	3.2	36	2.6	3.6	933
7....	2.4	1.8	2.6	24	5.8	2.2	3.6	28	22	10	14	290
8....	2.2	2.1	2.1	10	5.3	2.8	4.3	9.6	54	8.3	28	56
9....	2.1	2.1	2.4	8	4.8	3.3	5.8	2.1	988	9.6	8.3	16
10....	2.0	2.1	3.0	10	4.6	2.8	6.2	1.4	43	9.6	15	8.7
11....	1.8	2.2	3.3	32	5.0	3.0	5.0	1.4	170	9.6	38	7.5
12....	2.1	2.4	3.2	20	4.0	3.2	4.3	1.4	320	4.0	796	7.5
13....	2.2	2.4	3.2	10	3.2	3.0	3.3	1.5	76	5.6	33	270
14....	2.2	2.4	*20	6	3.6	2.8	3.8	1.5	73	27	2.2	1540
15....	2.4	2.6	75	7	3.8	4.0	4.0	1.2	27	7.9	3.0	354
16....	3.0	2.4	120	3.3	3.8	3.3	3.3	1.7	139	3.3	35	45
17....	2.8	2.6	10	3.3	3.8	3.0	3.0	2.6	2570	4.8	68	12
18....	2.7	2.4	4	3.3	3.8	3.2	2.7	3.8	810	3120	50	45
19....	3.6	2.2	4	3.8	3.8	3.0	2.4	2.4	255	2180	73	76
20....	2.1	2.1	4	3.8	4.0	2.6	2.2	2.8	2740	1660	13	14
21....	2.1	2.2	4	3.3	4.3	2.4	2.1	3.2	418	2140	7.5	11
22....	2.1	2.2	4	2.8	5.3	2.6	2.1	3.3	28	1920	6.2	7.5
23....	2.1	2.2	4	2.8	4.0	2.7	2.0	1210	5.8	155	5.8	5.8
24....	2.1	2.4	4	2.1	7.1	2.7	2.0	378	5.0	31	5.0	12
25....	1.7	2.6	4	3.2	6.2	2.4	2.1	27	5.3	27	5.3	12
26....	2.0	2.7	4	3.0	5.8	2.8	2.6	11	4.3	12	15	11
27....	2.2	2.1	9.6	3.0	5.8	2.8	3.0	8.7	4.3	12	6.2	8.3
28....	2.2	2.2	12	3.0	5.0	3.2	2.2	7.5	4.0	34	4.6	8.3
29....	2.4	2.2	12	3.0	....	3.2	2.6	7.1	4.3	15	5.0	8.3
30....	2.4	2.2	15	3.0	....	3.2	2.7	18	5.0	14	4.8	8.3
31....	2.4	....	8	3.0	....	3.3	....	24	....	12	4.3	....
Total	77.0	66.9	352.5	219.7	217.4	95.5	95.7	1801.7	\$901.5	11456.5	1268.7	9722.0
Mean.	2.48	2.23	11.4	7.09	7.76	3.08	3.19	58.1	297	370	40.9	324
Max..	3.8	2.7	120	32	36	4.8	6.2	1210	2740	3120	796	3550
Min...	1.7	1.8	2.1	2.1	3.0	2.2	2.0	1.2	4.0	2.6	2.2	4.8
Acre ft.	153	133	699	436	431	189	190	3570	17660	22720	2520	19280

Total run-off for water year 1937-38==67,980 acre-feet.

*Discharge measurement.

Discharge of Arkansas River at Holly, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	34	82	56	115	80	117	48	17	1710	107	17	271
2....	34	66	37	150	90	136	42	18	5900	52	16	546
3....	32	50	37	68	100	172	38	17	2030	52	12	150
4....	30	68	63	54	110	190	39	19	795	27	38	107
5....	30	63	66	58	115	79	39	15	1200	21	84	246
6....	33	65	70	60	123	70	48	18	580	18	60	1260
7....	33	66	172	35	136	65	55	26	290	16	25	7770
8....	32	68	194	25	115	70	55	30	268	15	16	7690
9....	30	68	209	26	115	65	54	19	1150	14	17	7010
10....	52	65	194	28	104	56	50	21	948	14	17	2630
11....	29	65	164	30	130	59	35	20	885	179	16	805
12....	29	43	157	35	201	59	30	23	785	86	12	338
13....	28	43	143	38	259	56	29	19	450	57	10	194
14....	25	43	143	40	224	54	25	19	704	44	10	141
15....	30	42	133	48	246	56	21	19	396	38	11	113
16....	28	44	93	52	186	57	20	16	234	24	10	100
17....	29	43	77	58	160	59	17	15	162	8	11	71
18....	33	38	70	57	150	50	17	11	127	8	11	60
19....	34	40	68	59	130	49	18	10	107	8	10	52
20....	29	42	69	61	130	52	23	15	93	201	9	44
21....	27	42	72	58	120	59	24	17	80	132	9	41
22....	37	43	88	54	104	56	23	15	66	55	9	35
23....	50	43	94	50	96	52	19	16	60	38	9	34
24....	75	43	93	70	88	59	19	14	55	34	9	34
25....	79	56	101	80	84	54	23	15	31	31	10	32
26....	86	59	93	96	57	77	21	21	27	29	19	30
27....	91	59	79	95	57	63	21	24	59	24	11	27
28....	72	63	80	89	77	52	21	21	323	20	11	24
29....	57	56	85	88	....	54	17	24	281	19	14	24
30....	51	52	83	85	....	55	17	23	165	15	10	23
31....	65	....	80	82	....	57	....	20	....	15	14	....
Total	1330	1620	3163	1904	3587	2209	908	577	19961	1401	537	29902
Mean.	42.9	54.0	102	61.4	128	71.3	30.3	18.6	665	45.2	17.3	997
Max..	91	82	209	150	259	190	55	30	5900	201	84	7770
Min...	25	38	37	25	57	49	17	10	27	8	9	23
Acre-ft.	2640	3210	6270	3780	7110	4380	1800	1140	39590	2780	1070	59310

Total run-off for water year 1936-37==133,100 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Holly, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	23	17	23	71	41	25	30	9.5	2120	16	109	4.4
2....	20	16	24	69	71	23	27	10	1010	35	64	4.4
3....	18	16	26	80	64	23	21	11	520	18	52	4.28
4....	16	18	26	56	83	23	21	9.5	367	16	44	2700
5....	13	17	23	60	91	21	23	11	242	19	36	7170
6....	11	20	26	61	94	18	21	27	242	20	28	4810
7....	9.5	20	28	47	105	18	13	200	235	20	22	3060
8....	7.7	20	18	75	75	19	19	185	196	19	19	1530
9....	5.9	20	20	82	59	25	24	111	1050	20	18	1090
10....	4.0	18	22	82	49	22	28	57	506	20	17	824
11....	18	17	30	88	44	21	21	44	156	19	18	714
12....	12	16	36	58	37	22	21	38	272	20	89	428
13....	11	15	30	82	28	19	21	40	367	16	306	2350
14....	10	15	67	92	34	19	21	43	251	12	73	1240
15....	11	15	75	92	23	23	19	35	242	23	44	1860
16....	15	15	40	77	14	24	22	35	1200	559	177	1030
17....	17	15	71	73	16	22	23	37	1680	810	138	597
18....	15	15	82	92	16	25	20	38	2230	958	675	350
19....	16	14	84	140	14	25	20	37	1020	6530	306	240
20....	20	14	82	56	17	24	20	30	2340	2100	205	284
21....	20	13	73	52	17	27	21	31	1500	1480	148	184
22....	18	13	73	47	18	22	20	71	695	2310	99	143
23....	20	18	82	35	25	23	22	1060	420	1030	73	113
24....	16	17	60	22	26	25	22	785	272	506	42	82
25....	15	13	61	18	24	24	35	408	222	284	26	71
26....	13	13	56	34	24	19	31	195	114	198	17	60
27....	13	12	58	49	25	22	1250	88	108	251	9.9	50
28....	13	11	71	73	25	34	44	64	102	154	11	42
29....	13	14	71	81	....	33	16	54	97	143	21	38
30....	13	21	84	60	....	31	12	127	35	116	15	30
31....	15	....	97	45	....	28	....	3080	....	154	7.7	....
Total	442.1	478	1619	2059	1159	729	1908	6971.0	19811	17876	2909.6	31566.4
Mean.	14.3	15.9	52.2	66.4	41.4	23.5	63.6	225	660	577	93.9	1052
Max..	23	21	97	140	105	34	1250	3080	2340	6530	675	7170
Min...	4.0	11	18	18	14	18	12	9.5	35	12	7.7	4.4
Acre-ft.	877	948	3210	4080	2300	1450	3780	13830	39290	35460	5770	62610

Total run-off for water year 1937-38=173,600 acre-feet.

Discharge of South Arkansas River Near Salida, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	70	25	44	38	50	47	27	11	78	45	6.6	7.0
2....	72	27	48	41	52	44	35	14	78	19	6.2	6.6
3....	70	23	54	44	60	41	30	24	78	8.8	4.6	6.2
4....	66	29	57	51	65	39	32	30	67	5.8	2.2	6.2
5....	61	41	60	47	75	38	35	58	62	2.8	0.7	5.0
6....	60	38	62	40	73	39	35	62	55	0.7	0.6	4.2
7....	57	38	55	35	74	39	30	64	48	0.7	2.4	2.0
8....	58	35	64	34	66	43	30	90	39	0.9	1.6	1.8
9....	48	36	62	35	68	41	28	110	38	0.9	0.8	1.8
10....	51	34	66	38	70	39	31	141	29	0.7	0.2	0.0
11....	51	34	58	41	69	36	36	139	17	0.7	0.1	0.1
12....	50	39	62	41	68	36	35	139	11	2.4	0.0	0.3
13....	48	38	61	45	48	32	35	178	8.8	0.3	0.3	0.6
14....	50	41	60	43	50	44	38	187	8.8	2.8	0.4	0.9
15....	40	36	54	44	52	46	40	192	3.8	1.0	0.7	1.4
16....	38	35	54	45	47	29	41	227	2.6	0.4	1.0	2.6
17....	40	36	50	44	47	25	45	212	2.2	1.6	5.8	2.8
18....	31	38	50	44	52	23	30	176	2.2	1.8	4.2	3.0
19....	23	34	51	43	48	21	35	200	1.2	1.6	2.2	3.4
20....	23	34	51	41	64	25	29	174	0.8	0.8	1.8	3.4
21....	28	36	50	40	57	19	29	151	1.0	0.5	2.8	3.0
22....	27	34	51	38	50	15	35	139	1.2	0.6	3.0	3.4
23....	27	27	54	42	47	12	44	135	1.4	0.6	3.0	3.4
24....	21	22	44	43	47	25	34	116	1.2	2.2	2.6	2.6
25....	26	19	47	46	44	25	23	103	0.9	2.6	2.8	5.8
26....	28	28	44	50	43	26	23	76	19	8.2	3.0	6.2
27....	26	23	45	48	50	26	28	55	44	8.2	3.8	3.4
28....	27	32	48	44	47	23	27	45	13	8.8	4.2	3.0
29....	25	43	52	46	....	34	21	50	6.2	8.8	6.2	2.8
30....	27	39	50	50	....	29	12	75	8.2	7.0	7.0	2.6
31....	27	....	45	51	....	30	....	83	....	6.2	7.0	....
Total	1300	994	1653	1332	1583	981	953	3456	726.5	152.2	87.8	95.5
Mean.	41.9	33.1	53.3	43.0	56.5	31.6	31.8	111	24.2	4.91	2.83	31.8
Max..	72	43	66	51	75	47	45	227	78	45	7.0	7.0
Min...	23	19	44	34	43	12	12	11	0.8	0.3	0.0	0.0
Acre-ft.	2580	1970	3280	2640	3140	1950	1890	6850	1440	302	174	189

Total run-off for water year 1936-37=26,400 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Arkansas River Near Salida, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.6	2.9	36	40	48	44	36	77	227	35	1.4	5.2
2....	4.5	3.6	47	27	51	45	29	49	227	24	1.8	18
3....	3.6	3.8	44	22	48	47	25	37	224	19	2.7	61
4....	3.1	4.5	44	39	41	45	25	30	215	16	2.7	84
5....	2.9	3.6	48	34	37	39	26	24	212	8.0	1.8	68
6....	2.5	3.6	44	24	41	27	28	30	205	1.4	0.4	45
7....	2.3	6.0	49	24	35	41	28	61	173	1.3	1.2	41
8....	2.3	6.3	54	22	24	42	27	63	164	0.7	1.5	51
9....	1.8	4.5	47	22	37	39	25	44	144	0.7	0.5	35
10....	1.8	4.9	51	16	41	29	24	37	131	0.5	0.6	30
11....	1.8	3.8	52	17	42	25	25	35	108	0.8	2.0	35
12....	1.8	4.5	49	23	41	23	28	41	106	0.8	1.3	44
13....	2.0	5.6	48	37	40	23	28	45	110	0.9	1.5	49
14....	3.4	3.6	48	41	40	22	27	57	90	0.8	2.5	44
15....	2.7	3.6	51	37	41	19	29	100	75	1.3	2.0	42
16....	3.1	4.9	51	36	42	19	29	142	71	2.3	1.4	54
17....	3.6	14	49	36	42	20	28	135	60	1.8	1.5	57
18....	4.9	17	51	40	40	19	34	123	55	1.3	1.5	49
19....	8.0	16	55	39	40	17	41	98	40	1.5	1.5	42
20....	6.3	19	58	29	40	15	45	96	33	1.0	1.5	40
21....	4.9	19	41	30	40	14	44	90	34	9.1	2.9	40
22....	4.5	19	44	31	49	13	44	77	45	3.1	2.5	39
23....	4.9	16	44	31	37	12	49	61	52	1.6	2.5	36
24....	4.5	16	48	32	36	16	54	57	49	0.6	2.0	39
25....	5.6	15	45	33	47	16	52	66	41	0.5	1.3	36
26....	4.9	16	45	34	55	24	57	79	36	0.5	1.3	35
27....	4.9	13	44	34	42	29	49	106	35	0.5	1.3	30
28....	3.8	21	57	35	42	34	47	173	31	0.5	1.3	24
29....	3.1	28	40	35	....	35	54	265	35	1.4	1.3	21
30....	2.9	30	40	34	....	34	57	256	37	1.4	1.1	16
31....	2.9	....	92	40	....	39	....	232	....	1.0	1.2	....
Total	114.9	328.7	1516	974	1159	866	1094	2786	3065	148.3	50.0	1210.2
Mean..	3.71	11.0	48.9	31.4	41.4	27.9	36.5	89.9	102	4.78	1.61	40.3
Max..	8.0	30	92	41	55	47	57	265	227	3.5	2.9	84
Min..	1.8	2.9	36	16	24	12	24	24	31	0.5	0.4	5.2
Acre-ft.	228	652	3010	1930	2300	1720	2170	5530	6080	294	99	2400

Total run-off for water year 1937-38=26,410 acre-feet.

Discharge of Grape Creek Near Westcliffe, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	73	47	....	....	....	....	52	46	111	38	12	22
2....	71	48	....	....	....	....	54	44	97	46	9.0	16
3....	47	42	....	....	....	....	50	43	119	50	8.0	12
4....	38	46	....	....	....	....	49	44	103	31	6.5	14
5....	32	57	....	....	....	....	52	45	87	22	5.5	12
6....	43	49	....	....	....	....	54	54	69	17	5.5	10
7....	65	42	....	....	....	....	50	69	54	14	5.5	10
8....	57	38	....	....	....	....	54	72	41	13	5.0	18
9....	42	32	....	....	....	....	91	74	36	11	4.7	9.0
10....	36	31	....	....	....	....	76	82	31	9.5	3.8	8.5
11....	31	30	....	....	....	....	101	85	27	9.5	3.5	8.0
12....	28	30	....	....	....	....	111	81	23	8.0	4.1	7.0
13....	26	....	....	....	....	....	143	77	23	6.5	9.0	6.5
14....	47	....	....	....	....	....	158	91	24	6.0	7.5	6.0
15....	45	....	....	....	....	....	199	102	24	4.7	6.0	6.0
16....	36	....	....	....	....	....	177	114	19	4.4	5.0	6.0
17....	33	....	....	....	....	....	125	127	18	4.1	4.7	7.0
18....	29	....	....	....	....	....	86	142	18	3.8	4.7	7.0
19....	27	....	....	....	....	....	81	148	18	3.2	5.0	7.0
20....	29	....	....	....	....	....	72	152	18	2.9	5.5	6.0
21....	31	....	....	....	....	....	64	132	20	2.9	5.5	5.5
22....	33	....	....	....	....	....	66	110	26	2.6	4.7	5.0
23....	39	....	....	....	....	....	67	100	21	2.6	4.4	5.0
24....	46	....	....	....	....	....	83	106	17	2.9	3.8	5.5
25....	38	....	....	....	....	....	73	103	18	3.8	4.4	6.0
26....	37	....	....	....	....	....	59	97	33	4.4	14	6.0
27....	52	....	....	....	....	....	56	76	98	10	26	6.0
28....	64	....	....	....	....	....	56	62	71	18	17	5.5
29....	51	....	....	....	....	....	53	80	43	20	16	6.0
30....	45	Nov. 1	....	....	....	....	49	264	35	21	17	7.5
31....	47	to 12	....	....	....	....	....	138	....	18	20	....
Total	1318	492	....	....	....	....	2461	2960	1342	410.8	253.3	256.0
Mean..	42.5	41.0	....	....	....	....	81.7	95.5	44.7	13.3	8.17	8.53
Max..	73	57	....	....	....	....	199	264	119	50	26	22
Min..	26	30	....	....	....	....	49	43	17	2.6	3.5	5.0
Acre-ft.	2610	976	....	....	....	....	4880	5870	2660	815	502	508

Total run-off for period=18,821 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Grape Creek Near Westcliff, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	8.0	9.6	.....	.....	.....	.....	33	28	97	110	12	30
2....	8.4	9.2	.....	.....	.....	.....	31	33	86	85	9.6	43
3....	8.4	9.2	.....	.....	.....	.....	33	26	95	64	9.6	106
4....	7.2	8.8	.....	.....	.....	.....	60	26	109	50	9.2	62
5....	6.0	8.2	.....	.....	.....	.....	135	23	127	38	8.0	43
6....	6.0	9.2	.....	.....	.....	.....	66	25	139	27	8.0	44
7....	7.6	10	.....	.....	.....	.....	38	40	162	18	8.4	52
8....	8.4	10	.....	.....	.....	.....	43	71	200	14	8.4	43
9....	8.4	9.6	.....	.....	.....	Mar. 11	42	113	176	11	7.2	40
10....	8.4	9.6	.....	.....	.....	to 31	35	63	133	8.8	8.0	37
11....	8.0	.....	.....	.....	*19	29	26	41	128	8.0	25	40
12....	8.4	.....	.....	.....	.....	29	24	34	103	7.6	26	65
13....	10	.....	.....	.....	.....	29	22	34	111	8.4	21	116
14....	9.2	.....	.....	.....	.....	28	21	32	166	13	23	116
15....	8.8	.....	.....	.....	.....	27	51	32	146	42	22	103
16....	9.6	.....	.....	.....	.....	24	100	44	122	33	19	95
17....	14	.....	.....	.....	.....	24	176	59	106	30	17	102
18....	12	.....	.....	.....	.....	24	65	56	93	41	14	76
19....	10	.....	.....	.....	.....	24	39	49	80	44	8.0	59
20....	9.6	.....	.....	.....	.....	24	33	44	61	55	7.2	53
21....	9.6	.....	.....	.....	.....	24	30	36	58	71	6.8	46
22....	9.6	.....	.....	.....	.....	22	27	33	51	50	6.4	40
23....	9.6	.....	.....	.....	.....	26	29	38	70	41	6.8	36
24....	9.6	.....	.....	.....	.....	27	27	33	86	33	6.8	36
25....	9.6	.....	.....	.....	.....	24	26	21	71	25	6.4	33
26....	9.2	.....	.....	.....	.....	25	21	19	120	22	7.2	30
27....	9.2	.....	.....	.....	.....	25	31	25	136	22	8.8	27
28....	8.8	.....	.....	.....	.....	29	32	40	131	20	7.6	25
29....	9.2	.....	.....	.....	.....	35	24	60	127	25	8.0	20
30....	9.2	Nov. 1	.....	.....	.....	35	24	85	144	20	10	18
31....	9.6	to 10	.....	.....	.....	25	.....	111	.....	14	27	.....
Total	279.6	94.0	.....	.....	.....	559	1344	1377	3434	1050.8	372.4	1636
Mean	9.02	9.40	.....	.....	.....	26.6	44.8	44.4	114	33.9	12.0	54.5
Max...	14	10	.....	.....	.....	35	176	114	200	110	27	116
Min....	6	8.8	.....	.....	.....	22	21	19	51	7.6	6.4	18
Acre-ft.	555	186	.....	.....	.....	1110	2670	2730	6810	2080	739	3240

Total run-off for period=20,120 acre-feet.

*Discharge measurement.

Discharge of St. Charles River at San Isabel, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.1	11	19	30	2.3	1.4
2....	2.1	12	24	24	2.3	1.0
3....	2.1	13	29	11	2.3	2.1
4....	1.9	12	22	7.1	2.3	3.9
5....	1.9	13	20	6.2	2.3	4.9
6....	2.1	14	18	5.9	2.1	4.9
7....	1.9	12	17	5.4	1.9	3.9
8....	1.7	33	16	5.4	1.9	6.8
9....	2.7	36	16	4.8	1.7	6.8
10....	4.1	27	14	4.8	1.7	3.6
11....	8.3	23	13	5.4	1.5	2.7
12....	11	22	12	5.9	1.9	2.1
13....	15	22	12	4.8	2.5	1.9
14....	19	25	11	5.9	2.1	1.9
15....	27	23	11	4.6	1.7	1.7
16....	40	22	11	3.6	1.5	1.7
17....	24	20	9.6	3.6	1.3	1.9
18....	17	20	8.6	3.6	1.2	1.9
19....	22	20	7.7	3.6	1.3	1.9
20....	24	18	7.1	3.4	1.5	1.7
21....	36	16	6.8	3.1	1.5	1.5
22....	47	14	6.5	2.9	1.2	1.5
23....	11	14	6.2	2.9	1.0	1.5
24....	12	14	5.7	3.1	.9	1.4
25....	14	17	6.2	3.6	3.1	1.4
26....	28	14	8.3	3.4	6.8	1.4
27....	34	13	9.9	3.6	8.3	1.4
28....	21	12	6.5	3.6	3.2	1.4
29....	16	20	5.9	3.4	1.9	1.5
30....	17	38	12	2.7	1.5	2.3
31....	30	.....	2.5	1.5	.....
Total	390.6	207	93	.....	.....	.....	465.9	600	372.0	183.8	68.2	74.0
Mean	12.6	6.9	3.0	.....	.....	.....	15.5	19.4	12.4	5.93	2.20	2.47
Max...	47	38	29	30	8.3	6.8
Min....	1.7	11	5.7	2.5	.9	1.0
Acre-ft.	775	411	184	.....	.....	.....	924	1190	738	365	135	147

Total run-off for period=4,869 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of St. Charles River at San Isabel, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.5	2.1	2.7	0.5	1.9	1.2	1.5	26	18	8.5	9.5	7.0
2....	2.1	2.1	2.5	.6	1.7	1.2	1.5	28	18	8.8	8.5	8.0
3....	1.9	2.1	2.5	.5	1.5	1.2	1.5	28	14	9.3	8.5	15
4....	1.9	2.1	.5	.8	1.4	1.2	1.6	31	14	7.5	9.0	11
5....	1.9	1.9	.8	.6	.6	1.2	1.7	18	14	9.8	8.0	6.2
6....	1.9	1.9	.8	1.0	1.2	1.2	1.9	12	15	9.8	8.0	6.5
7....	1.9	1.9	.6	.3	1.2	1.2	2.1	12	52	9.0	8.0	5.5
8....	1.9	1.5	.5	.3	1.0	1.2	2.1	22	31	9.0	8.0	5.0
9....	1.9	1.7	.5	.5	.8	3.2	1.7	19	22	7.8	7.0	5.0
10....	1.9	1.7	.5	.4	.4	3.4	1.7	16	18	11	7.5	5.0
11....	1.9	1.7	.6	.4	.3	1.9	1.5	18	18	10	8.0	5.0
12....	1.9	2.3	.8	.4	.3	1.2	4.1	24	16	9.8	8.0	7.5
13....	2.1	1.4	.8	.4	.3	1.4	4.1	38	20	9.8	7.5	10
14....	2.1	1.7	.9	.5	.4	1.4	4.1	86	24	82	7.0	5.5
15....	2.1	1.5	.9	.5	.5	1.5	4.1	99	22	60	7.0	5.4
16....	2.5	1.4	.8	.5	2.9	1.7	12	92	22	58	6.0	5.4
17....	2.7	2.5	.8	.6	2.1	1.5	13	86	17	46	6.0	8.9
18....	2.7	1.9	.6	.5	2.1	1.2	13	62	12	40	5.5	3.9
19....	2.1	2.1	3.2	.8	.5	1.9	17	38	12	40	5.0	3.9
20....	2.1	1.7	2.5	.8	.5	1.9	138	36	12	62	5.0	3.9
21....	2.1	1.7	1.2	1.0	.5	1.7	121	38	12	36	5.0	3.8
22....	2.5	1.7	1.2	.6	.8	1.5	44	32	12	28	5.0	3.8
23....	2.5	2.5	1.4	.5	1.4	1.5	50	30	12	24	5.0	3.6
24....	2.5	2.1	.9	1.2	1.0	1.4	70	29	12	24	5.0	2.7
25....	2.3	1.9	2.9	2.5	.6	1.4	95	28	12	24	5.0	6.1
26....	2.3	2.1	3.9	1.0	.6	1.5	44	21	16	28	5.0	5.1
27....	2.1	4.4	1.9	.8	1.0	1.5	30	20	18	24	5.5	3.8
28....	2.1	5.4	.6	.6	1.0	1.5	27	20	26	22	6.0	3.8
29....	2.1	3.4	.6	.9	....	1.7	24	20	10	20	6.1	3.8
30....	2.1	3.2	.5	2.9	....	1.7	34	20	10	14	5.3	3.5
31....	2.1	....	.5	2.1	....	1.5	....	19	....	12	6.0	....
Total	66.7	65.6	39.4	25.0	28.5	48.7	767.2	1068	531	764.1	205.9	173.6
Mean.	2.15	2.19	1.27	.81	1.02	1.57	25.6	34.5	17.7	24.6	6.64	5.79
Max..	2.7	5.4	3.9	2.9	2.9	3.4	138	99	52	82	9.5	15
Min..	1.9	1.4	.5	.3	.3	1.2	1.5	12	10	7.5	5.0	2.7
Acre-ft.	132	130	78	50	57	97	1520	2120	1050	1520	408	344

Total run-off for water year 1937-38=7,510 acre-feet.

Discharge of Huerfano River at Manzanares Crossing, Near Redwing, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	26	17	7	10	15	15	73	129	143	38	36
2....	31	23	17	7	11	15	22	77	143	115	37	78
3....	32	20	16	8	12	14	20	82	149	95	40	36
4....	29	30	15	9	13	13	18	90	126	84	36	45
5....	27	25	14	8	14	12	16	105	120	79	36	36
6....	25	26	15	6	13	14	15	126	113	79	51	35
7....	26	26	15	5	12	13	14	138	100	77	44	35
8....	25	25	14	6	11	14	15	138	97	71	37	31
9....	22	27	13	7	10	15	15	138	102	64	31	26
10....	21	27	13	8	12	16	18	132	95	57	28	22
11....	22	25	14	9	14	14	36	126	107	57	27	22
12....	24	24	13	9	13	13	52	132	123	52	26	22
13....	29	24	14	9	14	12	95	143	123	48	24	22
14....	32	24	14	9	14	11	118	162	123	48	23	22
15....	29	23	15	8	13	12	162	192	120	46	20	20
16....	25	21	13	8	13	14	140	192	126	42	19	18
17....	23	21	12	8	12	13	79	199	132	42	45	19
18....	25	23	12	7	11	13	61	199	129	41	28	19
19....	28	21	11	7	10	8.6	62	188	120	38	25	18
20....	30	20	9	6	10	15	79	178	118	38	26	16
21....	33	21	9	5	11	16	88	172	115	40	24	16
22....	31	19	10	4	12	17	93	165	113	41	23	18
23....	30	17	9	5	12	13	75	165	113	40	20	18
24....	32	21	9	7	13	14	62	159	113	38	20	17
25....	31	24	9	9	13	11	59	146	120	41	22	18
26....	30	22	8	11	13	12	68	129	149	44	23	17
27....	31	22	10	12	14	13	75	126	135	42	27	15
28....	31	23	9	10	15	14	68	126	105	52	26	16
29....	27	22	9	10	....	15	62	159	100	46	23	19
30....	30	20	8	11	....	14	66	168	152	44	24	20
31....	29	....	8	11	....	12	....	138	....	40	....	....
Total	872	692	374	246	345	417.6	1768	4463	3610	1784	915	703
Mean.	28.1	23.1	12.1	7.9	12.3	13.5	58.9	144	120	57.5	29.5	23.4
Max..	33	30	17	12	15	17	162	199	152	143	51	45
Min..	21	17	8	4	10	8.6	14	73	95	38	19	15
Acre-ft.	1730	1370	742	488	684	828	3510	8850	7160	3540	1810	1390

Total run off for water year 1936-37=32,100 acre feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Huerfano River at Manzanares Crossing, Near Redwing, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	18	14	18	.....	*10	11	13	95	236	107	30	34
2.....	17	15	14	.....	.....	11	16	79	230	91	30	44
3.....	18	16	12	.....	.....	11	14	75	236	83	34	61
4.....	16	16	*9.8	.....	.....	11	14	72	236	77	38	57
5.....	16	14	9.8	.....	.....	11	16	64	226	71	38	55
6.....	17	15	10	.....	.....	10	16	59	219	66	35	48
7.....	19	16	10	.....	.....	10	15	55	219	64	36	46
8.....	18	14	10	.....	.....	14	14	56	202	61	34	54
9.....	17	13	10	.....	.....	15	16	57	192	57	30	49
10.....	16	14	13	.....	.....	10	15	57	178	56	33	44
11.....	15	14	12	.....	.....	11	16	60	168	54	37	59
12.....	16	12	11	.....	.....	12	21	61	182	54	50	95
13.....	16	13	11	.....	.....	12	21	63	240	54	49	85
14.....	16	12	11	.....	.....	10	19	75	195	69	44	66
15.....	16	12	10	.....	.....	12	19	110	159	67	40	55
16.....	20	12	10	.....	.....	14	21	155	149	56	34	51
17.....	19	14	10	.....	.....	14	22	209	131	53	32	47
18.....	18	12	10	.....	.....	12	25	205	114	49	32	41
19.....	17	16	12	.....	.....	14	34	195	104	50	29	37
20.....	16	16	14	.....	.....	14	41	172	100	53	28	35
21.....	16	16	16	*6.1	*12	12	46	162	107	50	24	34
22.....	16	14	16	.....	.....	11	53	134	134	47	22	34
23.....	17	14	16	.....	.....	17	66	107	143	45	22	31
24.....	16	12	18	.....	.....	14	72	112	122	44	22	30
25.....	16	12	18	.....	.....	14	71	140	122	40	21	29
26.....	15	12	18	.....	.....	14	69	192	117	36	21	27
27.....	15	13	16	.....	.....	14	71	212	107	39	22	24
28.....	14	13	16	.....	.....	13	72	230	114	37	22	24
29.....	15	14	16	.....	.....	12	77	247	140	34	21	22
30.....	14	15	14	.....	.....	12	97	236	140	34	24	22
31.....	15	.....	10	.....	.....	14	.....	219	.....	31	34	.....
Total	510	415	401.6	269.7	274.4	386	1082	3965	4962	1729	968	1340
Mean.	16.5	13.8	13.0	8.70	9.8	12.5	36.1	128	165	55.8	31.2	44.7
Max.	20	16	18	.....	.....	17	97	247	236	107	50	95
Min.	14	12	9.8	.....	.....	10	13	55	100	31	21	22
Acre-ft.	1010	823	797	535	544	766	2150	7860	9840	3430	1920	2660

Total run-off for water year 1937-38=32,340 acre-feet.

*Discharge measurement.

Discharge of Huerfano River at Badito, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3.5	128	35	86	22	46
2.....	1.9	80	44	70	21	50
3.....	2.1	62	40	46	21	165
4.....	Mar. 6	1.7	61	56	37	23	98
5.....	to 31	1.9	45	82	27	21	56
6.....	2.4	2.4	42	90	20	15	51
7.....	3.0	4.2	58	111	20	16	52
8.....	5.8	3.9	53	108	20	15	52
9.....	3.9	1.2	60	63	20	12	53
10.....	3.7	2.5	63	53	21	8.5	39
11.....	1.4	2.5	58	42	21	33	37
12.....4	3.5	80	44	15	30	80
13.....4	2.5	85	75	20	23	104
14.....	1.5	4.0	102	100	103	36	80
15.....4	15	143	60	52	17	79
16.....2	38	153	53	104	11	74
17.....2	35	183	42	84	10	60
18.....	1.2	25	174	43	37	13	72
19.....	1.1	23	136	37	39	14	45
20.....5	21	119	33	39	20	48
21.....8	16	114	30	43	19	44
22.....3	34	103	41	42	17	38
23.....	3.0	35	92	66	33	19	36
24.....	1.5	39	58	53	33	17	39
25.....	1.0	44	43	49	26	16	26
26.....	3.0	60	37	108	19	18	28
27.....	2.4	37	75	84	11	41	19
28.....	2.5	51	65	76	15	23	18
29.....	1.4	57	74	97	16	19	15
30.....	2.7	52	74	97	18	23	15
31.....	2.4	51	71	97	18	23	15
Total	47.2	645.8	2588	1890	1162	610.5	1627
Mean.	1.82	21.5	83.5	63.0	37.5	19.7	54.2
Max.	5.8	60	183	111	104	41	165
Min.2	1.2	29	30	14	8.5	15
Acre-ft.	94	1280	5130	3750	2300	1210	3230

Total run-off for period=16,990 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Huerfano River Near Undercliffe, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....									29	60	9.6	204
2.....									26	47	7	240
3.....									18	36	6	100
4.....									21	25	7	51
5.....									32	22	7	77
6.....									77	6	8.8	46
7.....									1950	4	8.8	57
8.....									3120	2	18	73
9.....									558	0	15	62
10.....									282	0	28	66
11.....									258	0	131	51
12.....									8	0	17	53
13.....									40	0	17	57
14.....								May 16	45	90	15	42
15.....								to 31	45	64	18	41
16.....								321	28	66	23	44
17.....								445	21	117	22	62
18.....								539	8	166	17	39
19.....								560	10	105	15	38
20.....								560	68	171	14	38
21.....								507	51	110	12	31
22.....								980	8	66	6	33
23.....								475	3	87	1	18
24.....								234	11	80	1	12
25.....								165	120	42	0	11
26.....								111	45	31	0	8.0
27.....								62	83	23	0	14
28.....								45	70	36	0	14
29.....								34	60	26	23	9.6
30.....								32	55	15	25	11
31.....								35	...	10	49	...
Total.....								5105	7150	1507	521.2	1602.6
Mean.....								319	238	48.6	16.8	53.4
Max.....								980	3120	171	131	240
Min.....								32	3	0	0	8.0
Acre-ft.....								10130	14180	2990	1030	3180

Total run-off for period=31,510 acre feet.

Discharge of Cucharas River at Boyd Ranch Near LaVeta, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	18	17	11	10	9	11	21	51	155	59	18	9.8
2.....	17	15	10	9	10	11	20	52	172	56	18	8.6
3.....	17	18	11	9	9	9	19	59	272	53	18	10
4.....	16	19	11	9	10	10	23	53	267	47	16	13
5.....	14	16	11	10	10	11	20	59	232	44	16	11
6.....	18	15	11	8	10	11	15	75	184	40	16	9.4
7.....	17	16	12	6	10	10	13	91	155	38	15	11
8.....	16	14	11	6	9	10	17	128	130	34	15	9.4
9.....	18	11	10	7	9	12	15	157	119	32	14	7.8
10.....	17	12	9	8	10	11	21	172	108	32	13	7.8
11.....	16	12	10	8	10	11	53	184	101	37	13	8.6
12.....	15	11	10	9	10	10	62	170	94	34	13	7.8
13.....	15	11	9	9	10	9	71	177	90	31	15	6.7
14.....	16	12	10	9	10	8	85	184	88	30	13	7.0
15.....	15	12	13	8	10	8.6	112	206	84	29	12	7.0
16.....	14	12	12	9	11	8.6	138	211	80	27	11	6.1
17.....	15	14	11	8	11	9.8	119	206	77	26	12	6.7
18.....	14	13	10	7	11	12	69	206	80	24	13	7.4
19.....	14	15	11	8	10	9.4	73	204	77	23	11	7.0
20.....	16	14	12	9	9	12	71	201	75	22	11	11
21.....	17	14	11	8	9	9.8	69	179	74	21	11	7.0
22.....	17	14	11	8	8	11	66	166	71	20	10	8.2
23.....	16	12	11	8	8	13	64	159	68	20	9.4	8.2
24.....	17	14	12	8	8	15	54	153	67	19	8.6	7.4
25.....	18	16	12	8	9	17	46	140	72	18	11	8.6
26.....	18	14	12	10	10	18	52	123	86	17	11	8.6
27.....	18	14	10	10	10	20	65	114	76	18	12	7.4
28.....	18	14	11	10	11	14	71	110	68	24	12	7.4
29.....	17	14	11	10	....	9.8	60	119	65	23	10	8.2
30.....	18	11	10	10	....	11	54	136	63	21	11	11
31.....	18	....	10	9	....	12	....	146	....	19	11	....
Total.....	510	416	336	265	271	355.0	1638	4401	3350	938	400.0	254.7
Mean.....	16.5	13.9	10.8	8.55	9.68	11.5	54.6	142	112	30.3	12.9	8.49
Max.....	18	19	12	10	11	20	138	216	272	59	18	13
Min.....	14	11	9	6	8	8	13	51	63	17	8.6	6.1
Acre-ft.....	1010	825	666	526	538	704	3250	8730	6640	1860	793	505

Total run-off for water year 1936-37=26,050 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Cucharas River at Boyd Ranch Near La Veta, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	10	7.5	16	4.9	7.5	8.0	11	76	152	49	21	20
2....	9.0	8.5	10	4.9	7.5	8.0	14	61	150	46	22	18
3....	7.5	9.0	7.0	3.8	6.0	8.0	15	58	140	45	24	20
4....	6.6	8.5	7.5	5.2	4.9	8.0	9.0	56	135	40	33	20
5....	7.0	8.5	7.5	4.9	5.2	8.5	12	50	128	36	23	19
6....	8.0	8.5	7.5	6.3	8.0	5.6	14	46	118	36	24	19
7....	8.5	8.5	7.5	12	5.2	6.3	12	45	109	34	23	18
8....	8.5	9.0	7.5	14	4.6	10	18	47	100	33	21	17
9....	9.5	8.0	6.3	12	4.2	12	16	46	90	32	19	16
10....	8.5	9.0	7.0	11	4.2	6.3	16	51	77	30	20	18
11....	8.5	8.5	7.0	15	3.8	6.3	11	66	70	27	21	18
12....	10	7.0	6.3	16	4.6	7.5	18	80	105	27	21	18
13....	12	6.3	4.6	14	4.2	7.5	18	85	95	26	20	16
14....	9.5	6.3	4.9	9.5	3.2	6.6	18	113	87	68	18	16
15....	9.0	6.3	5.6	4.9	3.2	5.2	14	136	85	46	16	17
16....	14	5.2	5.6	4.2	5.6	6.6	14	144	82	38	15	18
17....	13	5.6	5.2	3.5	6.0	7.0	18	134	80	35	15	19
18....	10	5.6	5.6	3.5	9.5	9.5	25	125	71	35	15	18
19....	9.5	7.5	6.3	4.6	10.0	8.0	29	111	66	33	14	15
20....	8.5	7.0	10	8.5	8.0	8.5	33	102	61	38	14	15
21....	8.5	6.0	12	8.5	8.0	9.5	40	104	65	38	13	16
22....	8.5	6.0	12	9.0	8.0	9.5	41	115	72	35	12	14
23....	9.5	6.0	12	6.6	8.0	9.5	47	94	75	31	11	14
24....	8.0	6.0	16	12	8.0	10	47	85	60	29	12	16
25....	7.0	5.6	16	16	8.0	10	48	85	61	27	11	16
26....	6.6	6.0	16	14	8.0	10	48	86	63	26	11	16
27....	6.6	7.0	14	14	8.0	12	49	89	56	26	12	14
28....	7.0	7.5	14	12	8.0	10	46	107	54	26	15	14
29....	7.0	9.0	14	9.5	....	6.3	54	170	54	25	14	12
30....	7.5	12	12	9.5	....	6.3	67	165	54	24	14	12
31....	7.5	....	5.2	7.5	....	8.5	....	155	....	22	19	....
Total	270.8	221.4	288.1	281.3	179.4	255.0	822.0	2887	2615	1063	543	499
Mean.	8.74	7.38	9.29	9.07	6.41	8.23	27.4	93.1	87.2	34.3	17.5	16.6
Max..	14	12	16	16	10	12	67	170	152	68	33	20
Min..	6.6	5.2	4.6	3.5	3.2	5.2	9	45	54	22	11	12
Acre-ft.	537	439	571	558	356	506	1630	5730	5190	2110	1080	990

Total run-off for water year 1937-38=19,700 acre-feet.

Discharge of Apishapa River at Aguilar, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0	18	5.8	9.0	2.2	13
2....	0	13	7.6	13	9	12
3....	0	13	1.9	14	22	9.6
4....	0	14	0	15	4	18
5....	0	18	0	6.0	0	16
6....	0	18	0	0	0	18
7....	0	18	0	0	1.1	55
8....	0	50	0	0	1.6	16
9....	0	23	0	0	1.2	12
10....	0	40	0	0	34.9	14
11....	0	60	0	0	8.0	12
12....	0	55	0	0	9.6	10
13....	0	56	0	0	5.0	7.2
14....	0	70	0	26	0	7.6
15....	0	85	0	24	0	8.0
16....	0	73	0	20	0	5.3
17....	0	54	0	68	0	3.0
18....	0	45	0	60	0	6.1
19....	0	37	0	64	0	5.0
20....	0	26	0	73	0	4.2
21....	0	30	0	76	0	4.6
22....	0	40	0	56	0	5.3
23....	0	19	0	41	0	5.7
24....	0	17	0	26	0	5.7
25....	0	15	0	20	0	3.6
26....	0	13	11.7	17	0	3.3
27....	14	18	23	39	0	2.7
28....	15	9.4	192	13	0	2.4
29....	15	14	11	11	0	1.1
30....	19	13	6.6	8.6	0	1.5
31....	16	....	4.2	10	....
Total	63	990.4	364.9	703.8	411.0	287.9
Mean.	2.10	31.9	12.2	22.7	13.3	9.60
Max..	19	85	192	76	349	55
Min..	0	9.4	0	0	0	1.1
Acre-ft.	125	1960	724	1400	815	571

Total run-off for period 5,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Purgatoire River at Trinidad, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	55	37	22	15	25	11	22	78	355	262	92	60
2....	46	37	20	10	25	18	36	71	344	327	78	48
3....	42	37	15	8	28	18	46	92	490	238	67	37
4....	42	24	10	10	30	18	55	100	377	199	80	55
5....	49	44	8	14	30	24	41	92	355	177	110	102
6....	60	39	5	10	32	27	39	105	333	164	62	83
7....	58	37	5	8	51	29	41	127	290	154	55	381
8....	53	36	5	5	29	22	41	170	271	151	155	202
9....	49	29	5	4	10	30	42	215	266	132	95	44
10....	49	26	4	4	8	24	41	234	238	196	85	69
11....	53	27	5	5	10	21	55	262	229	144	110	98
12....	51	29	4	8	15	22	102	266	234	130	368	92
13....	42	24	6	12	48	27	105	290	220	110	113	90
14....	41	32	20	8	44	30	124	311	439	98	152	78
15....	46	27	25	10	46	26	154	338	243	85	69	53
16....	51	27	29	15	26	26	188	355	202	74	136	53
17....	51	27	10	13	20	27	181	366	202	64	108	58
18....	51	32	18	15	21	29	121	388	206	76	69	58
19....	46	30	25	18	34	26	118	377	215	85	64	51
20....	41	26	20	30	20	21	127	388	211	105	62	22
21....	48	27	25	20	26	22	116	372	206	76	200	20
22....	51	26	33	13	29	24	130	333	211	58	71	32
23....	49	27	35	14	26	26	157	333	202	53	51	44
24....	44	15	30	16	26	15	127	322	202	51	37	22
25....	39	14	20	20	34	20	108	300	316	58	46	16
26....	46	24	22	25	25	24	88	271	541	55	98	20
27....	48	29	20	30	15	29	98	243	594	57	64	20
28....	51	27	20	25	18	39	118	234	350	174	58	22
29....	44	29	15	27	...	36	108	234	290	169	76	18
30....	37	26	15	30	...	22	92	266	276	121	1180	30
31....	36	...	15	35	...	24	...	355	...	110	132	...
Total	1469	871	511	477	751	757	2821	7888	8908	3953	4143	1978
Mean.	47.4	29.0	16.5	15.4	26.8	24.4	94.0	254	297	128	134	65.9
Max..	60	44	35	35	51	39	188	388	594	327	1180	381
Min..	36	14	4	4	8	11	22	71	202	51	37	16
Acre-ft.	2910	1730	1010	946	1490	1500	5600	15650	17670	7840	8220	3920

Total run-off for water year 1936-37=68,490 acre-feet.

Discharge of Purgatoire River at Trinidad, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	42	24	16	16	22	32	16	148	1080	220	16	190
2....	31	20	17	13	25	24	20	188	300	200	12	63
3....	22	22	22	18	22	20	18	172	310	185	45	180
4....	19	22	18	12	21	19	17	169	701	170	225	156
5....	17	21	17	10	30	20	17	146	285	148	103	56
6....	16	21	24	7.1	17	22	18	178	280	121	90	210
7....	16	20	12	11	22	17	14	178	285	94	74	81
8....	17	22	8.1	11	21	21	18	191	310	81	85	59
9....	16	22	11	13	20	23	20	231	245	63	55	59
10....	17	21	13	15	19	20	20	219	240	45	65	59
11....	18	20	36	17	18	18	19	239	280	35	195	94
12....	20	21	30	18	18	18	18	321	235	27	143	121
13....	30	20	18	20	18	17	18	372	265	19	107	121
14....	30	16	12	21	17	17	20	427	320	99	70	81
15....	27	16	17	24	15	15	21	400	280	130	85	103
16....	41	18	14	24	10	14	19	287	280	121	56	148
17....	51	20	12	20	11	14	17	316	275	763	42	107
18....	37	15	12	14	12	18	16	278	255	370	35	81
19....	33	15	13	13	14	21	16	235	285	210	24	74
20....	30	14	15	11	14	16	24	201	225	325	19	70
21....	29	29	14	10	17	14	40	198	210	166	19	56
22....	30	25	14	28	19	14	52	287	205	112	18	49
23....	29	22	17	44	20	14	52	195	210	90	13	49
24....	29	20	20	28	20	14	51	163	250	70	11	45
25....	28	19	19	14	20	14	87	148	345	130	6.4	45
26....	27	18	18	14	25	14	79	160	385	81	4.0	45
27....	27	10	18	19	34	15	103	198	320	547	3.0	42
28....	24	15	19	22	34	16	73	247	290	121	2.5	40
29....	24	15	19	20	...	14	71	335	310	42	22	37
30....	24	15	20	16	...	16	92	410	245	27	99	37
31....	25	...	19	17	...	15	...	292	...	27	402	...
Total	826	578	534.1	540.1	555	546	1066	7508	9506	4839	2145.9	2558
Mean.	26.6	19.3	17.2	17.4	19.8	17.6	35.5	242	317	156	69.2	85.3
Max..	51	29	36	44	34	32	103	427	1080	763	402	210
Min..	16	10	8.1	7.1	10	14	14	146	205	19	2.5	37
Acre-ft.	1640	1150	1060	1070	1100	1080	2110	14890	18850	9600	4260	5070

Total run-off for water year 1937-38=61,880 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Purgatoire River at Nine Mile Dam, Near Higbee, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	52	19	12	10	5	11	9.2	14	2100	324	0.0	540
2.....	44	18	12	8	6	10	6.0	13	429	124	0.0	218
3.....	32	15	11	10	8	12	3.0	10	906	110	11	156
4.....	20	13	11	11	9	18	8.6	9.2	812	93	5.5	634
5.....	12	15	10	12	10	17	9.2	7.5	343	70	4.2	3170
6.....	15	13	10	11	11	16	9.8	8.0	172	38	1.0	1290
7.....	38	14	10	8	11	15	12	16	160	27	0.0	1210
8.....	79	17	11	5	12	14	14	14	349	24	0.0	522
9.....	46	16	11	3	11	13	14	9.8	342	21	0.0	429
10.....	32	16	12	3	14	12	15	7.0	522	15	0.0	191
11.....	24	15	12	4	16	10	16	44	211	10	0.0	114
12.....	20	14	12	4	17	9.6	18	70	230	9.4	0.0	99
13.....	19	13	12	4	18	12	14	47	408	7.0	395	69
14.....	20	12	12	4	24	18	9.8	43	140	5.5	225	50
15.....	20	12	12	4	22	18	20	47	97	3.2	36	38
16.....	18	12	11	4	25	20	13	88	318	1.8	22	32
17.....	15	12	9	4	20	20	11	268	121	0.5	26	21
18.....	13	12	6	3.2	17	18	3.0	191	55	822	15	17
19.....	12	11	7	3	16	20	3.5	112	43	459	14	15
20.....	9.8	11	6	3	15	24	3.0	99	482	204	14	12
21.....	9.8	12	6	3	13	18	0.9	146	163	188	119	9.2
22.....	18	14	8	3	13	14	0.6	89	72	136	2.1	8.0
23.....	17	14	10	4	12	11	2.4	104	46	121	6.8	7.2
24.....	17	11	10	5	12	12	5.5	121	33	18	6.1	6.1
25.....	23	9.8	11	5	9.8	13	5.5	84	26	10	10	5.9
26.....	26	9.8	11	6	10	13	4.0	119	50	6.4	267	6.6
27.....	23	9.8	12	7	11	15	5.0	131	461	21	158	6.6
28.....	20	9.2	15	7	12	13	12	153	531	12	33	6.4
29.....	19	10	12	8	.....	13	11	75	156	8.1	16	5.5
30.....	18	11	12	7	.....	14	10	54	121	3.7	876	4.9
31.....	19	.....	11	6	.....	9.8	.....	355	.....	0.0	1640	.....
Total	750.6	390.6	327	179.2	379.8	453.4	269	2548.5	10906	2892.6	3921.6	8893.4
Mean.	24.2	13.0	10.5	5.78	13.6	14.6	8.97	82.2	364	93.3	126	296
Max.	79	19	15	12	25	24	20	355	2100	822	1640	3170
Min.	9.8	9.2	6	3	5	9.6	0.6	7.0	26	0.0	0.0	4.9
Acre-ft.	1450	775	649	355	753	899	534	5050	21630	5740	7780	17640

Total run-off for water year 1936-37=63,300 acre-feet.

**Discharge of Purgatoire River at Nine Mile Dam, Near Higbee, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	5.0	15	15	12	10	16	14	25	23	77	70	1830
2.....	3.0	14	18	12	26	16	17	20	175	84	42	1120
3.....	13	13	16	12	23	17	17	18	551	37	25	435
4.....	13	15	15	11	19	17	16	14	175	21	17	242
5.....	9.8	13	15	11	22	18	15	13	204	22	213	398
6.....	7.3	14	13	10	14	16	19	22	504	20	163	405
7.....	6.3	13	11	10	14	15	16	35	237	17	61	264
8.....	5.6	13	8.2	14	14	15	15	25	674	14	29	259
9.....	4.6	14	4.1	21	13	17	15	61	242	10	15	187
10.....	4.6	16	5.4	18	13	16	14	65	163	8.2	123	167
11.....	4.6	16	7.0	20	14	14	13	55	495	2.8	2190	139
12.....	4.4	14	5.4	21	14	17	13	45	617	1.5	340	233
13.....	6.6	16	4.7	22	13	15	16	191	253	1.0	118	1590
14.....	8.6	17	5.0	31	13	15	16	142	305	0.5	89	361
15.....	9.2	18	9.0	21	13	18	16	41	237	105	61	101
16.....	13	18	6.0	22	12	17	14	35	746	276	56	65
17.....	121	20	5.7	22	12	11	11	29	573	712	136	49
18.....	197	20	*6.0	22	13	15	10	25	259	1190	31	44
19.....	73	31	10	24	15	16	8.4	23	126	540	21	42
20.....	52	23	10	24	20	15	11	18	98	1700	17	39
21.....	38	32	11	22	22	11	12	29	104	1100	14	35
22.....	33	56	10	16	*15	11	13	525	96	242	14	32
23.....	28	21	10	14	17	16	14	639	80	152	8.6	32
24.....	27	22	12	12	16	14	15	149	71	90	5.9	25
25.....	23	24	15	12	11	13	16	77	73	65	3.1	19
26.....	22	25	16	13	15	11	12	55	77	44	2.2	18
27.....	21	40	15	13	17	13	10	37	228	29	1.5	15
28.....	20	34	14	13	18	13	9.1	39	146	275	0.3	16
29.....	17	22	13	14	.....	11	8.7	30	120	312	0.0	14
30.....	20	17	13	10	.....	11	24	26	82	118	36	12
31.....	17	.....	12	9	.....	11	.....	22	.....	69	30	.....
Total	827.6	626	330.5	508.0	441	454	420.5	2530	7734	7329.0	3932.6	8188
Mean.	26.7	21	10.7	16.4	15.8	14.6	14.0	81.6	258	236	127	273
Max.	197	56	18	31	26	18	21	639	746	1700	2190	1830
Min.	3	13	4.1	9	10	11	8.4	13	23	0.5	0	12
Acre-ft.	1640	1250	656	1010	875	900	834	5020	15340	14540	7800	16240

Total run-off for water year 1937-38=66,100 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Purgatoire River at Highland Dam, Near Las Animas, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	28	16	8.2	6	5	5	6	2.5	2370	485	3.0	895
2....	39	14	9.7	5	6	8	5	2.0	796	259	1.5	257
3....	39	13	11	3	7	5	5	0.2	274	188	0.5	209
4....	26	14	11	4	9	5	4	0.0	1370	181	0.5	342
5....	19	17	12	5	12	5.4	5	0.0	415	164	0.0	1680
6....	18	15	12	4	13	28	6	0.0	160	110	0.0	3760
7....	22	15	15	3	14	41	10	0.0	103	27	0.0	1400
8....	36	13	7.0	1	10	35	12	0.0	311	14	0.0	2410
9....	68	16	8.2	1	10	20	11	0.0	382	15	0.0	761
10....	59	16	8.8	2	12	6	10	0.0	738	13	0.0	266
11....	29	15	11	1	19	6	10	0.0	334	13	0.0	118
12....	22	15	8.5	1	32	7	6.5	13	828	12	0.0	123
13....	20	13	9.7	1	20	7	7.9	26	658	7	54	70
14....	19	13	9.7	1	9.7	10	10	22	155	2	1000	56
15....	20	12	7.9	1	2	12	9.7	18	88	2	554	47
16....	18	12	8.8	1	0	16	8.8	13	169	0	28	38
17....	18	12	5.4	1	3	14	12	52	126	0	19	36
18....	16	12	4.1	1	5	12	10	118	68	0	21	24
19....	14	12	6.7	0.5	5	12	7.9	52	58	1520	14	21
20....	10	12	8.8	0.5	5	13	6.5	40	121	126	8.7	17
21....	9.7	10	5.9	0.5	5	12	5.4	35	131	118	856	13
22....	12	9.4	8.5	1	6	11	4.0	44	58	70	29	11
23....	14	10	14	1	6	13	0.0	24	22	62	19	9.4
24....	16	12	19	2	6	12	0.0	36	24	32	8.3	7.4
25....	18	12	20	2	4	9.7	3.0	42	31	21	3.5	6.4
26....	23	11	16	1	4	6.5	3.0	33	24	352	177	5.9
27....	23	7.6	15	2	4	8.2	0.0	28	44	303	334	4.1
28....	22	7.0	15	3	5	8	0.0	116	738	59	195	2.6
29....	20	7.3	8	5	....	6	0.0	103	382	27	58	2.0
30....	18	7.3	8	5	....	5	0.0	27	223	14	761	1.4
31....	17	....	8	6	....	6	....	142	....	7	1000	....
Total	732.7	370.6	320.9	71.5	238.7	364.8	178.7	988.7	11201	4203	5145.0	12595.2
Mean.	23.6	12.4	10.4	2.31	8.52	11.8	5.96	31.9	373	136	166	420
Max.	68	17	20	6	32	41	12	142	2370	1520	1000	3760
Min.	9.7	7.0	4.1	0.5	0	5	0	0	22	0	0	1.4
Acre-ft.	1450	735	636	142	473	724	354	1960	22220	8340	10200	24980

Total run-off for water year 1936-37=72,210 acre-feet.

**Discharge of Purgatoire River at Highland Dam, Near Las Animas, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.4	11	13	17	6.3	19	16	5.1	24	34	42	266
2....	1.8	8.8	13	14	8.0	17	17	8.6	29	36	42	1040
3....	5.4	9.4	12	16	8.6	16	19	10	398	33	26	634
4....	1.7	9.4	12	15	10	16	17	12	140	22	14	358
5....	12	9.7	11	11	9.0	18	16	11	85	15	25	216
6....	7.0	10	12	7.9	9.4	19	17	64	318	11	98	358
7....	4.1	8.5	11	8.4	7.9	18	15	74	169	9.8	54	230
8....	2.5	7.9	5.0	7.6	6.9	17	16	41	311	8.8	30	121
9....	1.8	9.4	4.0	8.8	9.2	22	17	31	195	6.9	8.5	126
10....	0.6	10	5.8	8.5	11	20	20	49	306	3.0	7.0	91
11....	0.6	12	10	7.3	11	18	11	82	433	2.5	1670	77
12....	0.6	14	20	9.6	11	16	10	70	188	2.0	704	75
13....	0	11	19	8.0	11	16	9.4	174	415	1.5	181	1200
14....	0	9.1	11	10	9.8	17	11	150	181	1.0	93	520
15....	1.4	14	16	14	11	21	14	93	318	0	70	145
16....	5.6	14	14	13	11	21	15	67	624	305	55	79
17....	15	15	14	14	8.8	19	13	47	1570	286	47	54
18....	244	13	21	11	10	20	10	30	433	2310	155	47
19....	98	9.7	15	9.4	16	22	8.6	23	209	1020	48	46
20....	67	11	13	8.5	16	20	8.0	20	315	1000	24	47
21....	49	14	16	11	15	19	7.9	19	70	2200	14	46
22....	38	27	11	8.0	20	18	7.9	57	89	33	3.0	34
23....	29	34	9.8	7.2	15	17	6.1	1470	73	164	2.0	28
24....	23	28	9.1	5.0	14	17	5.6	358	64	93	1.0	23
25....	18	24	10	2.0	20	18	5.6	105	47	67	0	19
26....	14	20	15	5.5	20	17	5.2	73	38	55	0	16
27....	12	20	18	5.2	19	18	55	65	40	44	0	14
28....	12	21	17	6.9	20	19	19	41	160	59	0	11
29....	12	21	17	8.2	....	18	9.0	50	80	174	0	11
30....	10	14	20	2.0	....	18	6.5	34	59	82	0	10
31....	11	....	20	1.0	....	15	....	38	....	56	6.5	....
Total	698.5	439.9	414.7	281.0	344.9	566	407.8	3371.7	7381	8134.5	3420	5942
Mean.	22.5	14.7	13.4	9.06	12.3	18.3	13.6	109	246	262	110	198
Max.	244	34	21	17	20	22	55	1470	1570	2310	1670	1200
Min.	0	7.9	4.0	1.0	6.3	15	5.2	5.1	24	0	0	10
Acre-ft.	1390	873	823	557	684	1120	809	6690	14640	16130	6780	11790

Total run-off for water year 1937-38=62,290 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Holly Drain, Near Holly, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	18	34	4.3	5.0	3.3	3.5	8.8	1.8	4.1	1.4	2.5
2....	32	53	28	5.1	5.0	3.5	3.5	6.6	12	4.2	1.2	2.7
3....	32	22	25	5.0	5.0	4.3	3.2	8.7	11	3.4	1.2	2.9
4....	34	27	30	6.9	6.0	22	3.0	7.4	39	2.7	1.5	31
5....	34	35	19	7.2	7.0	11	3.0	5.0	50	2.3	2.1	12
6....	31	20	14	10	8.0	14	3.1	3.6	50	1.8	2.0	24
7....	30	18	19	13	8.2	4.5	3.0	3.5	36	1.8	1.4	35
8....	32	13	11	8.8	6.4	3.5	2.9	3.5	62	2.4	1.2	14
9....	40	9.1	8.4	4.8	6.0	3.5	3.0	2.6	56	3.1	1.3	14
10....	37	14	7.2	4.8	6.0	3.6	3.2	3.3	24	2.4	1.1	18
11....	44	34	7.2	4.6	6.0	3.4	20	4.5	15	5.1	1.1	25
12....	50	33	7.2	4.6	6.0	3.4	18	2.2	23	1.5	1.2	25
13....	46	32	6.0	4.6	6.0	3.6	7.0	3.5	22	1.4	1.0	29
14....	32	34	6.3	4.6	5.6	4.7	4.5	3.9	26	1.4	1.7	31
15....	24	32	7.5	4.6	5.2	3.1	4.8	6.4	62	2.0	1.0	23
16....	28	31	7.2	4.6	5.4	3.7	8.4	3.6	55	1.2	1.0	17
17....	30	29	7.2	4.6	6.9	3.7	5.9	2.9	28	1.5	1.6	41
18....	29	29	7.2	4.6	8.8	3.7	8.2	4.6	12	1.8	1.7	34
19....	27	32	12	4.6	6.4	3.5	10	5.4	6.8	2.2	1.6	26
20....	24	38	17	4.6	2.2	3.5	9.4	4.3	5.4	2.2	1.4	16
21....	18	36	8.1	4.6	4.3	3.4	9.4	3.5	3.6	1.8	1.2	11
22....	30	32	9.4	4.6	7.2	3.6	11	4.3	3.2	2.0	1.2	6.6
23....	31	28	9.7	4.6	4.6	4.0	14	5.7	3.3	2.0	1.2	5.1
24....	18	62	7.8	4.6	3.7	4.1	14	5.7	3.2	2.0	1.2	4.2
25....	21	82	5.7	4.6	2.8	6.2	8.8	3.6	4.8	1.4	1.2	5.2
26....	22	66	10	4.6	2.0	4.1	6.2	3.1	2.8	2.2	7.5	8.2
27....	20	52	16	4.6	2.1	4.0	5.7	4.2	2.7	1.8	1.5	12
28....	14	39	7.8	4.6	2.5	3.6	12	2.4	2.7	1.9	1.4	9.6
29....	20	39	6.3	4.6	....	3.4	6.2	2.5	2.5	1.7	1.2	8.7
30....	24	40	4.8	4.6	....	3.5	6.4	2.4	2.6	1.4	1.2	16
31....	12	....	3.9	4.6	....	3.7	....	1.4	....	1.4	1.2	....
Total	898	1029.1	369.9	166.5	150.3	153.1	221.3	133.1	628.4	68.1	47.7	509.7
Mean.	29.0	34.3	11.9	5.37	5.37	4.94	7.38	4.29	20.9	2.20	1.54	17.0
Max.	50	82	34	13	8.8	22	20	8.8	62	5.1	7.5	41
Min.	12	9.1	3.9	4.3	2.0	3.1	2.9	1.4	1.8	1.2	1.0	2.5
Acre-ft.	1780	2040	734	330	298	304	439	264	1250	135	95	1010

Total run-off for water year 1936-37=8,680 acre-feet.

Discharge of Holly Drain, Near Holly, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	16	7.7	9.4	7.6	9.4	24	3.8	5.0	13	15	6.4	4.1
2....	12	5.3	8.8	7.2	4.1	17	5.3	5.5	42	10	4.3	118
3....	6.7	6.7	9.0	7.6	4.1	15	12	6.2	41	11	5.2	386
4....	7.2	5.6	8.6	6.9	4.2	23	13	6.9	12	9.2	2.7	96
5....	12	4.8	8.8	6.2	4.5	24	8.6	5.0	14	11	2.0	25
6....	13	5.6	9.2	5.5	4.9	24	4.8	7.6	24	6.7	2.6	22
7....	15	6.4	8.5	4.9	4.8	23	6.4	27.2	9.6	5.9	2.4	25
8....	9.8	7.4	7.4	4.9	4.8	26	7.6	5.2	14	6.7	2.0	60
9....	5.9	11	6.9	4.8	5.6	32	6.9	39	20.2	5.8	1.3	67
10....	4.2	14	8.8	4.5	4.6	32	8.6	32	32	6.4	0.7	71
11....	2.6	19	12	4.6	6.1	29	13	31	34	4.8	1.1	56
12....	2.5	19	16	4.1	18	29	9.4	32	39	2.5	1.5	32
13....	4.0	18	28	3.6	18	27	5.8	26	77	2.8	0.7	25
14....	7.2	19	20	3.5	17	22	9.4	25	88	1.2	5.0	22
15....	7.2	18	16	4.6	22	23	11	19	107	12	4.1	53
16....	8.8	17	14	5.5	18	21	6.6	15	113	33	328	58
17....	23	20	12	7.6	19	17	4.8	15	179	243	69	94
18....	24	20	10	5.9	19	17	6.6	10	64	86	34	91
19....	17	18	9.0	5.5	18	22	8.3	9.0	168	230	10	69
20....	14	20	9.2	6.6	20	22	8.3	7.2	296	45	8.1	56
21....	14	17	9.0	4.3	19	16	7.0	6.4	74	50	10	33
22....	15	20	8.6	3.6	25	17	4.9	19	99	69	9.4	15
23....	16	23	7.9	3.5	30	15	6.7	77	87	71	7.6	21
24....	19	23	7.6	3.0	44	12	9.4	47	58	51	6.6	20
25....	19	22	7.2	....	42	9.6	22.6	43	8.8	49	4.9	20
26....	15	22	6.9	*2.2	42	8.3	32	50	50	35	3.3	15
27....	13	16	6.6	2.4	38	7.4	7.4	30	15	27	2.3	15
28....	9.0	20	6.6	2.5	30	4.6	8.8	18	14	23	1.6	22
29....	7.2	9.4	6.7	2.6	....	4.0	5.2	12	11	30	4.5	16
30....	11	9.2	6.1	2.6	....	3.9	6.7	52	21	6.4	0.8	11
31....	11	....	7.0	3.0	....	3.8	....	29	....	13	0.5	....
Total	361.3	44.1	311.8	143.8	496.1	570.6	540.9	1072.2	2036.4	1172.4	542.6	1618.1
Mean.	11.7	14.8	10.1	4.64	17.7	18.4	18.0	34.6	67.9	37.8	17.5	53.9
Max.	24	23	28	7.6	44	32	22.6	27.2	296	243	328	386
Min.	2.5	4.8	6.1	2.2	4.1	3.8	3.8	5.0	8.8	1.2	0.5	4.1
Acre-ft.	717	881	618	285	984	1130	1070	2130	4040	2330	1080	3210

Total run-off for water year 1937-38=18,480 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

RIO GRANDE RIVER BASIN

RIO GRANDE RIVER AT THIRTY MILE BRIDGE NEAR CREEDE, COLORADO

Location—Water stage recorder in Sec. 13, T. 40 N., R 4 W., 30 miles southwest of Creede and $\frac{3}{4}$ mile below Rio Grande Reservoir.

Nearest Tributary—Squaw Creek enters just below station.

Drainage Area—163 square miles. Altitude, 9,380 feet above mean sea level.

Records Available—June 18, 1909, to September 30, 1923; May 16, 1925, to September 30, 1938.

Maximum discharge observed during period 1909-23, 1925-38; 7,500 second feet, June 28, 1927. Gage height 7.03 feet.

Maximum Discharge—Year 1937; 1,060 second feet June 18, 1937. Gage height 3.37 feet.

Maximum Discharge—Year 1938; 2,670 second feet June 22, 1938. Gage height 4.90 feet.

Accuracy—Records considered excellent except for those estimated from October 24, 1936, to April 11, 1937, and from December 6, 1937, to April 1, 1938, computed on basis of reservoir gate openings.

Diversions for storage above station. Flow regulated by Rio Grande Reservoir just above station (capacity 45,800 acre feet).

RIO GRANDE RIVER AT WASON, BELOW CREEDE, COLORADO

Location—Water stage recorder in Sec. 8, T. 41 N., R. 1 E., at Wason, 3 miles southeast of Creede.

Drainage Area—705 square miles. Altitude, 8,591 feet above mean sea level.

Records Available—April 24, 1907, to September 30, 1938.

Maximum discharge observed during period 1907-38; 9,750 second feet, June 28, 1927. Gage height 7.76 feet.

Maximum Discharge—Year 1937; 2,250 second feet, May 29, 1937. Gage height 2.97 feet.

Maximum Discharge—Year 1938; 5,350 second feet, June 22, 1938. Gage height 4.61 feet.

Accuracy—Records considered excellent except for period of ice effect from November 4, 1936, to March 13, 1937, and from November 28 to December 10, December 16, 1937, to February 8, 1938, February 14-15, 21-27, and March 8-11, 1938, computed on

basis of eight and four discharge measurements, gage heights and weather records, which are fair.

Diversions for irrigation above station. Flow regulated by three reservoirs (total capacity, 117,600 acre feet).

RIO GRANDE RIVER NEAR DEL NORTE, COLORADO

Location—Water stage recorder in Sec. 30, T. 40 N., R. 5 E., six miles west of Del Norte at State Bridge. From 1889 to September, 1907, station was maintained four miles below present station. Records are comparable.

Drainage Area—1,320 square miles. Zero of gage is 7,982.21 feet above mean sea level.

Records Available—October 11, 1889, to September 30, 1938.

Maximum discharge observed during period 1889-1938; about 18,000 second feet (revised), October 5, 1911. Gage height 6.80 feet from rating curve extended above 6,000 second feet.

Maximum Discharge—Year 1937; 3,920 second feet, May 18, 1937. Gage height 3.80 feet.

Maximum Discharge—Year 1938; 3,993 second feet, May 5, 1936. Gage height 3.83 feet.

Accuracy—Records considered excellent except for period of ice effect from December 4, 1936, to April 12, 1937, and December 12, 1937, to March 31, 1938, which were computed on basis of seven and five discharge measurements, weather and temperature records, and are good and for period chain gage readings April 1 to 18, 1938.

Diversions for irrigation above station. Flow regulated by three reservoirs above station (total capacity 117,600 acre feet).

RIO GRANDE RIVER NEAR MONTE VISTA, COLORADO

Location—Water stage recorder in Sec. 24, T. 39 N., R. 7 E., N. M. P. M., where Gunbarrel highway crosses river two miles north of Monte Vista.

Drainage Area—1,740 square miles. Zero of gage is 7,654.54 feet above mean sea level.

Records Available—May 1, 1926, to September 30, 1938.

Maximum discharge observed during period 1926-38; 18,500 second feet, June 30, 1927. Gage height 7.85 feet.

Maximum Discharge—Year 1937; 1,600 second feet, May 30, 1937. Gage height 3.04 feet.

Maximum Discharge—Year 1938; 4,480 second feet, June 14, 1938. Gage height 5.34 feet.

Accuracy—Records considered excellent except those estimated during ice period November 3-4, November 24, 1936, to March 4, 1937, and those for ice effect period, December 19, 1937,

to February 27, 1938, based on seven and four discharge measurements, weather records, and comparison with records for station near Del Norte, and are fair. Missing gage height periods, March 6-7, April 1-3, 1938, estimated.

Diversions for irrigation above station. Flow regulated by three main reservoirs (total capacity 117,600 acre feet) and several small reservoirs.

RIO GRANDE RIVER AT ALAMOSA, COLORADO

Location—Water stage recorder in Sec. 4, T. 37 N., R. 10 E., a quarter of a mile northwest of Alamosa. Prior to November 6, 1935, at site in Alamosa.

Drainage Area—1,840 square miles. Zero of gage at present site is 7,533.66 feet above mean sea level.

Records Available—May 15, 1912, to September 30, 1938.

Maximum discharge observed during period 1912-38; 14,000 second feet, July 1, 1927. Gage height 8.37 feet.

Maximum Discharge—Year 1937; 898 second feet May 31, 1937. Gage height 3.90 feet.

Maximum Discharge—Year 1938; 2,570 second feet, June 15, 1938. Gage height 6.50 feet.

Accuracy—Records considered good except for period of ice effect from November 29, 1936, to March 1, 1937, and November 29, 1937, to March 3, 1938, computed on basis of six and three discharge measurements, gage heights and weather records, and are fair.

Diversions for irrigation above station.

RIO GRANDE RIVER ABOVE MOUTH OF TRINCHERA CREEK NEAR LAS SAUSES, COLORADO

Location—Water stage recorder in Sec. 35, T. 36 N., R. 11 E., a quarter of a mile above mouth of Trinchera Creek and five miles north of Las Sauces.

Records Available—May, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 2,580 second feet, June 16, 1938. Gage height 7.02 feet.

Maximum Discharge—Year 1937; 984 second feet, June 1, 1937. Gage height 4.72 feet.

Maximum Discharge—Year 1938; 2,580 second feet, June 16, 1938. Gage height 7.02 feet.

Accuracy—Records fair. Those for ice effect period December 4, 1936, to March 2, 1937, computed on basis of three discharge measurements and weather records and for ice period December 9, 1937, to March 4, 1938, computed on basis of three discharge measurements and weather records. Records estimated by com-

parison with Alamosa station from June 10 to July 7, 1938, because of backwater from Conejos River.

Diversions for irrigation above station.

RIO GRANDE RIVER NEAR LOBATOS, COLORADO

Location—Water stage recorder in Sec. 22, T. 33 N., R. 11 E., six miles north of Colorado-New Mexico line at highway bridge and 10 miles east of Lobatos.

Drainage Area—7,700 square miles (includes 2,940 square miles in closed basin). Zero of gage is 7,426.79 feet above mean sea level.

Records Available—June 28, 1899, to September 30, 1938.

Maximum discharge observed during period 1899-1938; 13,100 second feet, June 8, 1905.

Maximum Discharge—Year 1937; 4,370 second feet May 19, 1937. Gage height 4.90 feet.

Maximum Discharge—Year 1938; 4,040 second feet, May 2, 1938. Gage height 4.69 feet.

Accuracy—Records considered excellent in 1937 and good in 1938 except for periods of ice effect December 5, 1936, to March 8, 1937, December 2, 1937, to February 27, 1938, which were computed on basis of seven and five discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

CLEAR CREEK BELOW CONTINENTAL RESERVOIR, COLORADO

(Formerly Called North Clear Creek)

Location—Water stage recorder in Sec. 22, T. 42 N., R. 3 W., 1,000 feet below Continental Reservoir and 15 miles west of Creede, Colorado.

Drainage Area—49 square miles.

Records Available—May 1, 1929, to September 30, 1938.

Maximum discharge observed during period 1929-38; 313 second feet, May 4, 1937. Gage height 3.41 feet.

Maximum Discharge—Year 1937; 313 second feet, May 4, 1937. Gage height 3.41 feet.

Maximum Discharge—Year 1938; 237 second feet, May 27, 1938. Gage height 2.98 feet.

Accuracy—Records considered excellent except those for October 5 to 31, 1936; April 1 to 16, 1937; July 14-17, 1937; and November 2, 1937, to April 27, 1938, June 12-14, and August 29 to September 11, 1938, which were estimated and computed on basis of gate openings at Continental Reservoir above station, and are fair.

Flow regulated by Continental Reservoir above station. (Capacity 26,700 acre feet.)

SOUTH FORK RIO GRANDE RIVER AT SOUTH FORK, COLORADO

Location—Water stage recorder in Sec. 4, T. 39 N., R. 3 E., $1\frac{1}{4}$ miles above mouth and $1\frac{1}{2}$ miles southwest of South Fork. Records 1910-20 were obtained at a site one mile downstream and are comparable.

Drainage Area—216 square miles. Zero of gage is 8,221.79 feet above mean sea level.

Records Available—August, 1910, to December, 1920; May 1936, to September 30, 1938.

Maximum discharge observed during period 1910-20, 1936-38; about 5,000 second feet, October 5, 1911.

Maximum Discharge—Year 1937; 1,950 second feet, May 17, 1937. Gage height 5.46 feet.

Maximum Discharge—Year 1938; 1,920 second feet, May 29, 1938. Gage height 5.44 feet.

Accuracy—Records considered good in 1937 and excellent in 1938 except those during ice period, December 24, 1937, to April 4, 1938, which were estimated on basis of five discharge measurements and weather records, and are fair.

Diversions for irrigation and several small storage reservoirs above station.

PINOS CREEK NEAR DEL NORTE, COLORADO

Location—Water stage recorder in Sec. 29, T. 39 N., R. 5 E., just below mouth of Bennett Creek, and eight miles southwest of Del Norte.

Drainage Area—53 square miles.

Records Available—May, 1919, to September, 1924; May, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 720 second feet (determined by slope-area method) August 3, 1936. Gage height 4.19 feet.

Maximum Discharge—Year 1937; 259 second feet, May 17, 1937. Gage height 2.68 feet.

Maximum Discharge—Year 1938; 293 second feet, May 28, 1938. Gage height 2.92 feet.

Accuracy—Records considered good in 1937 and excellent in 1938, except for period of missing gage height, October 19-21, 1937, which were estimated and are good.

One small diversion for irrigation above station.

SAN FRANCISCO CREEK NEAR DEL NORTE, COLORADO

Location—Water stage recorder in Sec. 31, T. 39 N., R. 6 E., $1\frac{1}{4}$ miles below mouth of East Fork and 6 miles south of Del Norte.

Drainage Area—13.1 square miles.

Records Available—April, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 364 second feet (slope-area method), July 27, 1936. Gage height 1.47 feet.

Maximum Discharge—Year 1937; 42 second feet, May 19, 1937. Gage height 0.68 feet.

Maximum Discharge—Year 1938; 71 second feet May 27, 1938. Gage height 1.02 feet.

Accuracy—Records considered good except those estimated for August 9-16, 1937, and during ice effect period November 1 to 30, 1936, which are fair.

Small diversions for irrigation above station.

ROCK CREEK NEAR MONTE VISTA, COLORADO

Location—Water stage recorder in Sec. 36, T. 38 N., R. 6 E., 3 miles below North Fork and 9 miles southwest of Monte Vista. April, 1919, to September, 1924, water stage recorder $1\frac{1}{2}$ miles downstream.

Drainage Area—33.6 square miles.

Records Available—April, 1919, to September, 1924; May, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 154 second feet, August 11, 1935. Gage height 2.65 feet.

Maximum Discharge—Year 1937; 138 second feet, July 1, 1937. Gage height 2.60 feet.

Maximum Discharge—Year 1938; 116 second feet, May 28, 1938. Gage height 2.28 feet.

Accuracy—Records considered good except those estimated November 6-10, 1936, and those estimated for April 13-21, 1937, October 1-14, 1937, which are fair.

Diversions for irrigation above station.

ALAMOSA RIVER ABOVE TERRACE RESERVOIR,
COLORADO

Location—Water stage recorder in Sec. 8, T. 36 N., R. 6 E., three miles above Terrace Reservoir Dam and 15 miles northwest of Capulin.

Drainage Area—107 square miles.

Records Available—September, 1911, to June, 1912; April,

1914, to October, 1919; October, 1923, to September, 1927; October, 1934, to September 30, 1938.

Maximum daily discharge observed during period 1911-12, 1914-19, 1923-27, 1934-38; 4,250 second feet, October 5, 1911.

Maximum Discharge—Year 1937; 1,400 second feet, May 17, 1937. Gage height 3.95 feet.

Maximum Discharge—Year 1938; 1,630 second feet May 28, 1938. Gage height 4.09 feet.

Accuracy—Records considered excellent in 1937 and good in 1938 except for estimated periods, April 1 to 13, 1937; April 1 to 8, 1938; July 15-16, 18-19, 20, 26-31, 1938. No record December 1, 1936, to March 31, 1937, and November 12, 1937, to March 31, 1938.

No diversions above station.

ALAMOSA RIVER BELOW TERRACE RESERVOIR, COLORADO

Location—Water stage recorder in Sec. 23, T. 36 N., R. 6 E., in canon $\frac{1}{2}$ mile below Terrace dam and 11 miles northwest of Capulin.

Drainage Area—116 square miles. Altitude, 8,400 feet above mean sea level.

Records Available—April 18, 1909, to November 30, 1912; April 1, 1915, to October 31, 1915; February 1, 1917, to October 31, 1920; April 1, 1922, to September 30, 1938.

Maximum daily discharge observed during period 1909-12, 1915, 1912-20, 1922-38; 1,450 second feet, June 16, 17, 18, 1917.

Maximum Discharge—Year 1937; 1,040 second feet, May 23, 1937. Gage height 4.33 feet.

Maximum Discharge—Year 1938; 1,190 second feet, May 29, 1938. Gage height 4.76 feet.

Accuracy—Records considered good in 1937, and excellent in 1938 from March 17 to September 30, and fair for balance of period. Winter flows estimated on basis of reservoir gate openings.

Diversions for storage above station. Flow regulated by Terrace Reservoir, capacity 17,700 acre feet.

LA JARA CREEK AT GALLEGOS RANCH NEAR CAPULIN, COLORADO

Location—Water stage recorder in Sec. 32, T. 34 N., R. 7 E., 2 miles above old station called "La Jara Creek near Capulin, Colorado" (records not comparable), and 12 miles southwest of Capulin.

Drainage Area—73 square miles.

Records Available—May 1, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 653 second feet April 15, 1937. Gage height 5.94 feet.

Maximum Discharge—Year 1937; 653 feet, April 15, 1937. Gage height 5.94 feet.

Maximum Discharge—Year 1938; 504 feet, April 20, 1938. Gage height 5.17 feet.

Accuracy—Records considered excellent except for ice effect periods October 31 to November 30, 1936; April 1-12, 1937, computed on basis of discharge measurements and weather records and are good. No records December 1, 1936, to April 1, 1937, and from November 8, 1937, to March 19, 1938.

Diversion for storage and irrigation above station. Flow regulated by La Jara Reservoir, capacity 14,040 acre feet.

TRINCHERA CREEK ABOVE TURNER RANCH NEAR FORT GARLAND, COLORADO

Location—Water stage recorder in Sec. 2, T. 31 S., R. 71 W., above Turner ranch and 7 miles southeast of Fort Garland.

Nearest Tributary—Station just below north and south forks. Drainage Area—45 square miles.

Records Available—April 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1923-1938; 318 second feet, May 23, 1926. Gage height 2.54 feet.

Maximum Discharge—Year 1937; 233 second feet, May 16, 1937. Gage height, 1.72 feet.

Maximum Discharge—Year 1938; 212 second feet, May 31, 1938. Gage height 1.63 feet.

Accuracy—Records considered excellent except for discharge estimated April 1 to 7, 1938, which are good.

No diversions above station.

TRINCHERA CREEK ABOVE MOUNTAIN HOME RESERVOIR, NEAR FORT GARLAND, COLORADO

Location—Water stage recorder in Sec. 31, T. 30 S., R. 71 W., at flume just above Mountain Home Reservoir, and 4 miles southeast of Fort Garland.

Drainage Area—61 square miles.

Records Available—May 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1923-1938; 385 second feet, May 24, 1926. Gage height 1.84 feet.

Maximum Discharge—Year 1937; 192 second feet, June 5, 1937. Gage height 2.48 feet.

Maximum Discharge—Year 1938; 178 second feet, May 30, 1938. Gage height 2.39 feet.

Accuracy—Records considered good except those for period of backwater effect from reservoir, June 16 to July 15, 1937, which was computed by comparison with upper stations and reservoir gage heights, and are fair.

Diversions for irrigation above station.

TRINCHERA CREEK BELOW SMITH RESERVOIR, NEAR BLANCA, COLORADO

Location—Water stage recorder in Sec. 5, T. 31 S., R. 73 W., 1 mile below Smith Reservoir and 5 miles southwest of Blanca, and 500 feet west of bridge on Blanca-San Acacia highway.

Drainage Area—396 square miles.

Records Available—October 1, 1929, to September 30, 1938.

Maximum discharge observed during period 1924-1938; 584 second feet, April 18, 1937. Gage height 5.20 feet.

Maximum Discharge—Year 1937; 584 second feet, April 18, 1937. Gage height 5.20 feet.

Maximum Discharge—Year 1938; 330 second feet, May 17, 1938. Gage height 4.13 feet.

Accuracy—Records considered good except those from November 3, 1937, to March 4, 1938, which were computed from reservoir losses and releases, and are fair. No records December 1, 1936, to March 30, 1937.

Diversions for irrigation and storage above station. Flow regulated by Smith Reservoir, capacity 5,335 acre feet.

SANGRE DE CRISTO CREEK NEAR FORT GARLAND, COLORADO

Location—Water stage recorder in Sec. 23, T. 30 S., R. 72 W., 1½ miles east of Fort Garland on Turner ranch road.

Drainage Area—187 square miles.

Records Available—March 15 to October 9, 1916; May 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1916, 1923-1938; 1,520 second feet (slope-area method), August 31, 1936. Gage height 6.10 feet.

Maximum Discharge—Year 1937; 1,194 second feet, April 16, 1937. Gage height 6.59 feet.

Maximum Discharge—Year 1938; 363 second feet, May 16, 1938. Gage height 3.78 feet.

Accuracy—Records considered good except those for periods of ice effect and missing gage heights, November 27-30, 1936, April 1-8, 1937, which were estimated and are fair. No records December 1, 1936, to March 31, 1937, and from November 10, 1937, to March 31, 1938.

Diversions for irrigation above station.

UTE CREEK NEAR FORT GARLAND, COLORADO

Location—Water stage recorder in Sec. 10, T. 30 S., R. 72 W., at flume $2\frac{1}{2}$ miles north of Fort Garland.

Drainage Area—32 square miles.

Records Available—March 16 to October 8, 1916; May 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1916, 1923-1938; 353 second feet, August 5, 1936. Gage height 3.05 feet.

Maximum Discharge—Year 1937; 323 second feet, June 30, 1937. Gage height 3.52 feet.

Maximum Discharge—Year 1938; 165 second feet, June 6, 1938. Gage height 2.26 feet.

Accuracy—Records considered excellent except for ice effect periods, October 12 to November 30, 1936, April 1-2, 1937, which were computed on basis of five discharge measurements and weather records, and are good.

Diversions for irrigation above station.

CONEJOS RIVER AT PLATORO, COLORADO

Location—Water stage recorder in Sec. 22, T. 36 N., R. 4 E., $\frac{1}{2}$ mile below Platoro.

Drainage Area—44.4 square miles.

Records Available—April 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 1,230 second feet, May 28, 1938. Gage height 3.17 feet.

Maximum Discharge—Year 1937; 1,120 second feet, May 17, 1937. Gage height 2.92 feet.

Maximum Discharge—Year 1938; 1,230 second feet, May 28, 1938. Gage height 3.17 feet.

Accuracy—Records considered excellent in 1937 and good in 1938, except for ice effect period, and for missing gage heights, April 1-2, 1937; November 24-26, December 5-9, 14-18, 1937; June 13-15, 1938; August 14-16, 22 to September 19, 1938, which were computed on basis of discharge measurements and comparison with Conejos at Mogote.

No diversions above station.

CONEJOS RIVER NEAR MOGOTE, COLORADO

Location—Water stage recorder in Sec. 34, T. 35 N., R. 7 E., 12 miles west of Antonito at Broyles bridge and $5\frac{1}{2}$ miles north-west of Mogote.

Drainage Area—282 square miles. Altitude, 8,300 feet above mean sea level.

Records Available—September 1, 1899, to March 31, 1900, and April 17, 1903, to October 31, 1905, at a point one mile below

present station. March 21, 1907, to October 5, 1911, 3 miles above present station, January 1, 1912, to September 30, 1938, at present station.

Maximum Discharge—Year 1937; 3,260 second feet, May 18, 1937. Gage height 4.79 feet.

Maximum Discharge—Year 1938; 3,280 second feet, May 29, 1938. Gage height 4.83 feet.

Accuracy—Records considered excellent except for those estimated December 1, 1936, to April 21, 1937, computed on basis of eight discharge measurements and weather records, and for November 21-23, December 8, 1937, to February 28, 1938, computed on basis of five discharge measurements and weather records and are good.

No diversions or regulations above station.

CONEJOS RIVER NEAR LAS SAUSES, COLORADO

Location—Two water stage recorders in Sec. 2, T. 35 N., R. 11 E., 2 miles north of Las Sauces and $\frac{1}{2}$ mile above mouth. Stream enters Rio Grande River through two channels and combined record is published.

Drainage Area—887 square miles. North channel zero of gage is 7,496.02 feet above mean sea level.

Records Available—March 29, 1921, to September 30, 1938.

Maximum daily discharge observed during period 1921-1938; 3,650 second feet, May 24, 1932.

Maximum Discharge—Year 1937; 3,520 second feet, May 16, 1937.

Maximum Discharge—Year 1938; 2,860 second feet, May 2, 1938.

Accuracy—Records considered good for 1937, except those for ice effect periods. December 21, 1936, to February 28, 1937, and July 4 to September 30, by comparison of records of two channels, which are fair. Records are excellent for 1938 except those for ice effect January 1 to 26, 1938, March 1-7, which were computed on basis of two discharge measurements and comparison of records for two channels.

SAN ANTONIO RIVER AT ORTIZ, COLORADO

Location—Water stage recorder in Sec. 19, T. 32 N., R. 9 E., $\frac{1}{2}$ mile south of Ortiz just across state line and $\frac{1}{2}$ mile above mouth of Los Pinos Creek.

Drainage Area—110 square miles.

Records Available—January 1 to October 31, 1915; May 1, 1919, to October 31, 1920; October 1, 1924, to September 30, 1938.

Maximum Discharge—Year 1937; 1,750 second feet, April 15, 1937. Gage height 5.38 feet.

Maximum Discharge—Year 1938; 917 second feet, May 1, 1938. Gage height 3.77 feet.

Accuracy—Records considered good except estimated record April 1-8, 1937, April 1-4, 6-8, 1938; August 20-24, which are fair. No records December 1, 1936, to March 31, 1937, and November 7, 1937, to March 31, 1938.

Small diversions for irrigation above station.

SAN ANTONIO RIVER AT MOUTH, NEAR MANASSA, COLORADO

Location—Water stage recorder in Sec. 21, T. 34 N., R. 10 E., $2\frac{1}{2}$ miles east of Manassa and one mile above mouth near highway crossing. Prior to April 23, 1936, at site 200 feet upstream at bridge.

Drainage Area—348 square miles.

Records Available—April 1, 1923, to September 30, 1938.

Maximum discharge observed during period 1923-38; 1,890 second feet, May 5, 1924.

Maximum Discharge—Year 1937; 1,680 second feet, April 16, 1937. Gage height 5.93 feet.

Maximum Discharge—Year 1938; 1,530 second feet, May 1, 1938. Gage height 5.87 feet.

Accuracy—Records considered good, except those for ice effect period and period of missing gage heights, December 5, 1936, to March 17, 1937, January 1, 1938, to March 16, and April 2-3, 1938, which were computed on basis of seven discharge measurements in 1937 and three in 1938, and weather records, and are fair.

Diversions for irrigation above station.

LOS PINOS RIVER NEAR ORTIZ, COLORADO

Location—Water stage recorder in Sec. 34, T. 32 N., R. 8 E., 3 miles southwest of Ortiz.

Drainage Area—167 square miles. Altitude, 8,100 feet above mean sea level.

Records Available—January 1, 1914, to November 30, 1920; October 1, 1924, to September 30, 1938.

Maximum discharge observed during period 1914-20, 1924-38; 770 second feet, May 9, 1937. Gage height, 5.30 feet.

Maximum Discharge—Year 1937; 2,770 second feet, May 9, 1937. Gage height 5.30 feet.

Maximum Discharge—Year 1938; 2,270 second feet April 30, 1938. Gage height 5.08 feet.

Accuracy—Records considered excellent except those estimated for November 3-13, 26, 30, 1936; April 1-4, 7-13, 1937, and those for June 19-23, 1937, computed on basis of four discharge

measurements and weather records, and are fair. No record December 1, 1936, to March 31, 1937, November 7, 1937, to March 31, 1938.

Diversions for irrigation above station.

CULEBRA RIVER AT SAN LUIS, COLORADO

Location—Water stage recorder in Sec. 35, T. 3 N., R. 72 W. (Beaubien Grant Survey), 1 mile southeast of San Luis. Twelve foot Parshall Flume since May 1, 1931.

Drainage Area—220 square miles.

Records Available—May 1, 1909, to September 2, 1919; April 1, 1927, to September 30, 1938.

Maximum Discharge—Year 1937; 296 second feet, June 17, 1937. Gage height 3.22 feet.

Maximum Discharge—Year 1938; 361 second feet, August 11, 1938. Gage height, 3.63 feet.

Accuracy—Records, considered good except those estimated for January 1 to February 21, 1937.

Diversions for irrigation and storage above station. Flow regulated by Sanchez Reservoir, capacity 103,100 acre feet.

LA GARITA CREEK NEAR LA GARITA, COLORADO

Location—Water stage recorder in Sec. 10, T. 41 N., R. 6 E., at Curby ranch, 4 miles southwest of La Garita Post Office. Gage moved a quarter of a mile upstream November 14, 1935, and set to independent datum. Records comparable for both sites.

Drainage Area—61 square miles.

Records Available—April 1, 1919, to September 30, 1938.

Maximum discharge observed during period 1919-38; 395 second feet, July 14, 1938. Gage height 2.07 feet.

Maximum Discharge—Year 1937; discharge not determined, 1937. Gage height 1.91 feet.

Maximum Discharge—Year 1938; 395 second feet, July 14, 1938. Gage height, 2.07 feet.

Accuracy—Records considered good except for those estimated November 3-14, 20-30, 1936, April 1-6, July 14 to August 4, 1937, October 29-31, computed on basis of gage heights and weather records, and those estimated for September 1-5, 1938, which are fair. No records during winter.

Diversions for irrigation above station.

CARNERO CREEK NEAR LA GARITA, COLORADO

Location—Water stage recorder in Sec. 26, T. 42 N., R. 6 E., 3 miles northwest of La Garita at O'Dell ranch.

Drainage Area—117 square miles.

Records Available—April 1, 1919, to September 30, 1938.

Maximum discharge observed during period 1919-1938, 500 second feet, April 14, 1924.

Maximum Discharge—Year 1937; 182 second feet April 15, 1937. Gage height 1.51 feet.

Maximum Discharge—Year 1938; 186 second feet, April 22, 1938. Gage height, 1.50 feet.

Accuracy—Records considered good except for records estimated November 3-13, 1930, 1936; April 1-6, July 14 to August 3, 1937, which are fair. No records December 1, 1936, to March 31, 1937, and from November 1, 1937, to March 31, 1938.

Diversions for irrigation above station.

SAGUACHE CREEK NEAR SAGUACHE, COLORADO

Location—Water stage recorder in Sec. 11, T. 45 N., R. 6 E., at Ward's ranch, 10 miles west of Saguache.

Drainage Area—595 square miles.

Records Available—August 7, 1910, to September 23, 1912; June 1, 1914, to September 30, 1938.

Maximum discharge observed during period 1910-12, 1914-38; 746 second feet, June 15, 1921. Gage height 3.45 feet, former datum.

Maximum Discharge—Year 1937; discharge not determined.

Maximum Discharge—Year 1938; 469 second feet May 30, 1938. Gage height 2.33 feet.

Accuracy—Records considered good except for those estimated for November 18-30, 1936, May 14-18, 1937, which are fair. No records December 1, 1936, to April 6, 1937, and December 11, 1937, to March 31, 1938.

Diversions for irrigation above station.

KERBER CREEK AT ASHLEY RANCH NEAR
VILLA GROVE, COLORADO

Location—Water stage recorder in Sec. 7, T. 46 N., R. 8 E., at Ashley ranch, 10 miles west of Villa Grove.

Drainage Area—38 square miles.

Records Available—June, 1923, to September, 1926; May, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 306 second feet (slope area method), July 30, 1936.

Maximum Discharge—Year 1938; 158 second feet, April 5, 1938. Gage height, 3.15 feet.

Accuracy—Records considered excellent except those for May 7-12, 14 and June 26-30, 1937, which are good.

No diversions above station.

NORTH CRESTONE CREEK NEAR CRESTONE, COLORADO

Location—Water stage recorder in Sec. 5, T. 43 N., R. 12 E., 3 miles above junction with South Crestone Creek, and $1\frac{1}{2}$ miles above Crestone.

Records Available—1915; May, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 735 second feet by slope-area determination, August 6, 1936. Gage height, 4.33 feet.

Maximum Discharge—Year 1937; 88 second feet, May 14, 1937. Gage height 1.61 feet.

Maximum Discharge—Year 1938; 141 second feet, May 28, 1938. Gage height 1.96 feet.

Accuracy—Records considered good except those for November 3-4, 29, 30, 1936; April 1-14, 1937, computed on basis of one discharge measurement and weather records, and are fair.

No diversions above station.

**Discharge of Rio Grande River at Thirty Mile Bridge, Near Creede, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2	...	...	...	...	...	3	284	397	616	484	88
2....	12	...	...	...	...	...	3	312	338	629	434	75
3....	12	...	...	...	...	...	3	316	294	559	402	76
4....	12	...	...	...	...	...	3	319	179	534	397	80
5....	12	...	...	...	...	...	3	196	143	501	393	70
6....	12	...	...	...	...	...	3	434	147	518	375	67
7....	12	...	...	...	...	...	3	643	335	602	363	80
8....	12	...	...	...	...	...	3	583	469	670	388	70
9....	12	...	...	...	...	...	3	371	319	707	406	62
10....	12	...	...	...	...	...	3	397	420	663	388	57
11....	12	...	...	...	...	...	15	565	559	602	316	53
12....	12	...	...	...	...	...	22	596	495	650	287	53
13....	12	...	...	...	...	...	39	240	464	629	397	50
14....	12	...	...	...	...	...	76	42	501	636	439	49
15....	12	...	...	...	...	...	166	12	602	577	444	48
16....	12	...	...	...	...	...	156	14	677	518	444	45
17....	12	...	...	...	...	...	156	16	833	552	402	45
18....	12	...	...	...	...	...	156	17	964	616	380	44
19....	12	...	...	...	...	...	156	19	919	670	359	44
20....	12	...	...	...	...	...	156	19	816	616	350	42
21....	12	...	...	...	...	...	156	21	629	565	327	42
22....	12	...	...	...	...	...	159	147	643	546	316	43
23....	12	...	...	...	...	...	240	367	714	540	327	44
24....	12	...	...	...	...	...	280	776	737	534	342	43
25....	12	...	...	...	...	...	276	622	663	534	304	39
26....	12	...	...	...	...	...	276	546	518	577	312	39
27....	12	...	...	...	...	...	199	479	254	534	346	38
28....	12	...	...	...	...	...	294	479	425	512	434	54
29....	12	...	...	...	...	...	335	658	650	506	618	67
30....	12	...	...	...	...	...	250	616	622	501	323	116
31....	2	...	...	...	...	...	...	490	...	495	123	...
Total	62	60	62	62	70	93	3593	10594	15725	17909	11618	1723
Mean.	2.0	2.0	2.0	2.0	2.5	3.0	120	342	524	578	375	57.4
Max.	2	...	...	...	...	...	335	776	964	707	616	116
Min.	2	...	...	...	...	...	3	12	143	495	123	38
Acre-ft.	123	119	123	123	139	184	7130	21010	31190	35520	23040	3420

Total run off for water year 1936-37= 122,100 acre-feet.

**Discharge of Rio Grande River at Thirty Mile Bridge, Near Creede, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	88	43	0.6	0.6	0.6	0.6	0.9	7.8	72	1300	631	368
2....	84	43	0.6	0.6	0.6	0.6	0.9	160	520	1090	652	325
3....	80	42	0.6	0.6	0.6	0.6	0.9	344	1670	1000	645	306
4....	80	41	0.6	0.6	0.6	0.6	0.9	268	2090	974	638	225
5....	69	37	0.6	0.6	0.6	0.6	0.9	190	2010	787	638	202
6....	62	35	0.6	0.6	0.6	0.6	0.9	113	1730	819	610	185
7....	61	49	0.6	0.6	0.6	0.6	0.9	7.8	1070	965	610	174
8....	56	32	0.6	0.6	0.6	0.6	0.9	7.8	1030	763	617	156
9....	50	34	0.6	0.6	0.6	0.6	0.9	7.8	1020	956	544	147
10....	50	40	0.6	0.6	0.6	0.6	0.9	56	1000	1110	520	147
11....	48	40	0.6	0.6	0.6	0.6	0.9	141	1020	1050	526	149
12....	49	30	0.6	0.6	0.6	0.6	17	156	1100	947	520	23
13....	42	31	0.6	0.6	0.6	0.6	62	228	1860	844	508	15
14....	43	37	0.6	0.6	0.6	0.6	96	133	1400	819	532	15
15....	54	32	0.6	0.6	0.6	0.6	14	9.8	844	811	502	15
16....	54	28	0.6	0.6	0.6	0.6	0.9	10	869	771	437	15
17....	50	27	0.6	0.6	0.6	0.6	1.2	11	1210	732	410	15
18....	58	38	0.6	0.6	0.6	0.6	2.1	12	1640	695	392	16
19....	40	35	0.6	0.6	0.6	0.6	2.4	13	1560	673	384	16
20....	51	50	0.6	0.6	0.6	0.6	2.4	13	1490	645	356	16
21....	56	36	0.6	0.6	0.6	0.6	2.4	14	1900	659	344	16
22....	52	35	0.6	0.6	0.6	0.6	2.7	15	2640	638	325	16
23....	56	30	0.6	0.6	0.6	0.6	3.3	192	2310	584	292	43
24....	54	30	0.6	0.6	0.6	0.6	3.9	62	1630	544	265	116
25....	53	25	0.6	0.6	0.6	0.6	5.1	17	1440	526	292	137
26....	52	25	0.6	0.6	0.6	0.6	6.0	18	1470	551	325	149
27....	54	30	0.6	0.6	0.6	0.6	6.0	20	1420	557	329	149
28....	53	35	0.6	0.6	0.6	0.6	6.3	22	947	590	325	137
29....	51	15	0.6	0.6	...	0.6	6.9	23	1170	490	340	113
30....	49	0.6	0.6	0.6	...	0.6	7.8	25	1590	526	360	107
31....	44	...	0.6	0.6	...	0.6	...	27	...	551	397	...
Total	1743	1005.6	18.6	18.6	16.8	18.6	258.3	2324.0	4177.2	23967	14266	3513
Mean.	56.2	33.5	0.60	0.60	0.60	0.60	8.61	75.0	139.2	77.3	460	117
Max.	88	50	0.6	0.6	0.6	0.6	96	344	2640	1300	652	368
Min.	40	0.6	0.6	0.6	0.6	0.6	0.9	7.8	72	490	265	15
Acre-ft.	3460	1990	37	37	33	37	512	4610	82850	47540	28300	6970

Total run-off for water year 1937-38=176,400 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Rio Grande River at Wason, Below Creede, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	162	129	66	64	75	105	94	760	1210	1110	954	328
2....	154	120	62	60	75	108	101	1030	1140	1090	909	271
3....	149	76	78	55	75	90	103	1150	109	1010	900	251
4....	146	104	76	55	75	100	101	1170	935	900	892	239
5....	141	120	80	60	75	100	99	1240	816	900	874	232
6....	149	118	82	65	75	95	107	1080	736	883	874	224
7....	146	118	72	65	75	90	101	1510	808	926	857	239
8....	146	102	78	65	75	85	94	1780	1100	1010	792	232
9....	139	96	82	65	75	85	99	1570	1060	1050	808	217
10....	132	98	92	65	75	85	119	1420	935	1040	784	202
11....	124	94	88	77	75	80	156	1420	1230	1020	696	192
12....	120	100	86	77	75	80	220	1810	1260	1070	585	179
13....	118	104	92	*77	75	90	303	1700	1130	1090	532	170
14....	111	113	98	77	75	91	478	1450	1160	1050	635	164
15....	109	111	100	77	75	101	696	1370	1180	1010	627	161
16....	109	122	82	77	75	88	800	1350	1330	900	696	156
17....	109	115	76	77	75	88	688	1400	1510	892	728	153
18....	107	111	84	77	75	93	565	1320	1690	964	680	148
19....	111	100	86	77	75	90	578	1120	1720	1090	665	146
20....	132	88	84	77	75	88	572	1080	1520	1240	650	146
21....	132	90	84	77	76	94	650	1090	1340	1080	642	144
22....	122	80	74	77	76	94	944	1170	1220	1040	642	144
23....	120	71	74	77	*76	96	832	1400	1320	1030	650	148
24....	118	64	70	77	80	91	792	1810	1320	1010	532	148
25....	122	76	74	77	85	88	808	1580	1260	1030	498	141
26....	122	71	80	77	88	91	973	1340	1150	1160	491	136
27....	120	62	80	77	92	86	992	1290	883	1130	518	134
28....	111	69	76	77	94	87	673	1410	752	1070	599	139
29....	111	62	74	77	....	91	784	1780	1060	1060	752	156
30....	124	66	70	77	....	80	720	1800	1130	1030	768	262
31....	129	....	64	....	....	86	....	1440	....	954	452	....
Total	3945	2850	2464	2236	2167	2816	14242	42840	34995	31839	21682	5602
Mean..	127	95.0	79.5	72.1	77.4	90.8	475	1382	1166	1027	699	187
Max....	162	129	100	77	94	108	992	1810	1720	1240	954	328
Min....	107	62	62	55	75	80	94	760	736	883	452	134
Acre-ft.	7820	5650	4890	4440	4300	5590	28250	84970	69410	63150	43010	11110

Total run-off for water year 1936-37=332,600 acre-feet.

*Discharge measurement.

Discharge of Rio Grande River at Wason, Below Creede, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	258	141	90	74	75	72	94	1070	1970	2410	1120	883
2....	220	141	90	74	75	85	89	883	2200	2080	1260	842
3....	213	139	85	72	75	75	96	1150	3670	1820	1350	685
4....	206	136	85	72	80	72	107	1010	4200	1720	1330	626
5....	202	132	80	72	80	82	128	842	4000	1510	1290	513
6....	182	127	80	68	85	75	126	731	3640	1430	1280	473
7....	176	139	80	66	90	82	121	500	2580	1570	1240	441
8....	170	136	80	64	90	82	118	357	2270	1340	1210	429
9....	167	116	80	62	89	70	136	375	2140	1440	1120	398
10....	161	130	80	58	78	80	175	369	2250	1630	1080	429
11....	161	138	86	58	89	78	229	582	2240	1630	1210	778
12....	161	125	84	56	77	78	330	663	2310	1470	1300	943
13....	161	110	81	56	85	82	448	770	3830	1380	1240	685
14....	153	114	77	58	80	80	429	1060	3560	1370	1230	513
15....	161	127	74	*58	80	82	330	1080	2360	1380	1170	429
16....	182	105	70	66	80	82	217	1130	2240	1370	1010	392
17....	164	108	70	72	77	82	266	1110	2490	1370	942	357
18....	167	121	70	76	82	80	429	961	3110	1360	926	324
19....	156	107	65	76	87	80	561	917	2870	1350	961	298
20....	151	125	60	76	80	80	575	810	2820	1310	1060	279
21....	161	130	65	74	80	89	596	810	3320	1300	1010	262
22....	156	119	70	74	75	91	678	818	4840	1330	978	253
23....	156	98	70	72	75	91	802	875	4560	1310	917	240
24....	156	99	70	72	75	103	892	1370	3320	1250	851	298
25....	156	112	70	72	75	118	996	1130	2730	1200	754	324
26....	153	107	70	70	75	141	926	1410	2730	1180	802	346
27....	151	99	70	74	75	141	778	1630	2570	1250	892	335
28....	151	90	70	74	74	128	883	1950	2110	1060	875	335
29....	148	90	*70	76	....	123	1130	2270	2600	1200	908	335
30....	144	91	70	76	....	103	1300	2040	3130	1110	892	314
31....	144	....	70	76	....	87	....	1950	....	1120	834	....
Total	5248	3550	2332	2144	2238	2794	13985	32623	88660	43250	33043	13759
Mean..	169	118	75.2	69.2	79.9	90.1	466	1052	2955	1427	1066	459
Max....	258	141	90	76	90	141	1300	2270	4840	2410	1350	943
Min....	144	90	60	56	74	70	89	357	1970	1060	754	240
Acre-ft.	10410	7040	4630	4250	4440	5540	27740	64710	175900	87770	65540	27290

Total run-off for water year 1937-38=465,300 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande River Near Del Norte, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	289	270	193	143	....	....	210	1250	2510	1690	1110	536
2....	284	252	146	146	....	....	250	1650	2440	1720	1090	428
3....	270	187	143	157	....	....	300	2120	2440	1580	1100	389
4....	266	172	126	151	....	....	250	2190	2260	1380	1050	372
5....	257	241	160	....	....	*178	220	2540	1960	1320	1080	362
6....	270	261	175	....	....	....	260	2070	1750	1270	1060	357
7....	275	244	163	....	....	....	300	2340	1650	1240	1040	372
8....	270	225	193	....	....	....	250	2820	2000	1320	982	372
9....	270	187	218	....	....	....	270	3100	2060	1340	944	337
10....	261	196	172	....	....	....	250	2860	1780	1340	926	317
11....	244	202	134	....	....	....	325	2860	2100	1430	846	299
12....	237	205	163	....	....	....	500	3140	2340	1420	719	294
13....	229	202	184	....	....	....	667	3350	2130	1420	631	281
14....	225	218	178	....	....	....	890	3250	2120	1320	682	268
15....	222	218	160	....	*164	....	1220	3310	2080	1310	704	260
16....	218	214	*163	....	....	....	1690	3400	2240	1160	742	248
17....	211	222	172	....	....	....	1690	3630	2400	1090	821	244
18....	205	229	163	....	....	....	1160	3630	2630	1130	797	240
19....	208	229	160	....	....	....	1280	3250	2670	1170	764	236
20....	244	208	163	....	....	....	1180	3120	2510	1350	726	232
21....	266	205	157	....	....	....	1300	2980	2460	1220	734	229
22....	252	208	151	....	....	....	1720	2880	2370	1140	704	232
23....	244	193	146	*190	....	....	1370	3080	2470	1130	719	240
24....	244	163	140	....	....	....	1260	3210	2420	1120	653	244
25....	241	175	137	....	....	....	1640	2960	2320	1110	570	240
26....	244	190	151	....	....	....	1980	2510	2260	1220	549	232
27....	233	184	137	....	....	....	1340	2390	1980	1340	576	229
28....	225	181	134	....	....	....	1280	2470	1500	1270	631	225
29....	218	193	137	....	....	....	1230	2840	1660	1270	711	244
30....	241	175	140	....	....	....	1220	3190	1730	1250	872	367
31....	266	....	137	....	....	....	....	2820	....	1150	749	....
Total	7629	6249	4896	....	....	....	27502	87210	65240	40220	25282	8926
Mean.	246	208	158	160	170	190	917	2813	2175	1297	816	298
Max.	289	270	218	....	....	....	1980	3630	2670	1720	1110	536
Min.	205	163	126	....	....	....	210	1250	1500	1090	549	225
Acre-ft. 15130	12390	9710	9840	9440	11680	54550	172980	129400	79780	50150	17700	....

Total run-off for water year 1936-37=572,800 acre-ft.

*Discharge measurement.

Discharge of Rio Grande Near Del Norte, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	490	268	135	....	....	....	249	2720	4310	3610	1280	937
2....	389	268	182	....	....	....	232	1910	4140	3190	1350	1020
3....	262	260	248	....	....	....	225	2090	5650	2770	1440	918
4....	347	256	211	....	....	....	211	1830	6130	2590	1460	872
5....	337	252	204	....	....	....	211	1510	6030	2330	1420	757
6....	313	240	207	....	....	....	232	1330	5700	1990	1380	689
7....	294	256	197	....	....	....	291	1140	4840	2090	1340	667
8....	290	268	185	....	....	....	352	872	4270	1920	1330	667
9....	281	232	170	....	....	....	322	909	3900	1810	1220	624
10....	276	244	165	....	....	*271	417	854	3970	2110	1120	617
11....	272	252	165	....	*159	....	607	993	3670	2170	1260	1020
12....	272	248	165	....	....	....	667	1200	3840	2110	1430	1560
13....	285	218	165	....	....	....	757	1320	5130	1950	1420	1260
14....	276	207	165	....	....	....	1000	2070	5630	2160	1380	909
15....	268	229	165	*158	....	....	667	2620	4290	2090	1350	888
16....	322	218	165	....	....	....	610	2870	3920	1950	1160	749
17....	322	200	165	....	....	....	530	2890	3970	1840	1070	726
18....	304	229	160	....	....	....	805	2550	4400	1760	965	646
19....	299	207	150	....	....	....	1290	2520	4230	1650	974	604
20....	268	218	145	....	....	....	1320	2170	4090	1630	1080	563
21....	272	210	150	....	....	....	1480	2140	4270	1560	1050	536
22....	290	200	160	....	....	....	1700	2210	5430	1560	1020	523
23....	290	200	160	....	....	....	2070	1910	5940	1530	974	503
24....	294	191	160	....	....	....	2340	2870	5060	1430	928	497
25....	299	194	160	....	....	....	2520	2610	4030	1340	821	549
26....	299	179	160	....	....	....	2360	3100	3880	1310	813	549
27....	290	170	160	....	....	....	1910	3510	3780	1390	918	543
28....	285	168	160	*164	....	....	2110	4140	3430	1650	909	530
29....	276	163	160	....	....	....	2640	4930	3820	1480	928	523
30....	276	163	160	....	....	....	3060	4630	4400	1320	984	497
31....	272	....	160	....	....	....	....	4240	....	1260	918	....
Total	9410	6608	5264	5115	5880	7750	33185	72758	136150	59550	35692	21943
Mean.	304	220	170	165	210	250	1106	2347	4538	1921	1151	731
Max.	490	268	248	....	....	....	3060	4930	6130	3610	1460	1560
Min.	268	163	135	....	....	....	211	854	3430	1260	813	497
Acre-ft. 18660	13110	10440	10150	11660	15370	65820	144360	270000	118100	70790	43520	....

Total run-off for water year 1937-38=791,900 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande River Near Monte Vista, for Year Ending Sept., 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	96	39	166	*182	....	230	68	256	858	665	143	21
2....	89	132	182	....	....	235	38	350	732	642	162	19
3....	86	162	186	....	....	230	34	525	778	543	150	14
4....	80	174	174	....	....	223	26	507	778	459	112	14
5....	61	203	178	....	....	210	83	581	628	375	136	24
6....	53	238	174	....	....	199	92	402	477	284	102	21
7....	53	243	166	....	....	261	23	489	375	158	132	31
8....	51	234	186	....	....	214	13	695	430	143	75	39
9....	48	216	174	....	....	214	10	794	519	125	19	26
10....	51	212	174	....	....	266	8.8	665	365	115	16	23
11....	61	207	194	....	....	275	16	650	365	150	12	23
12....	64	212	203	....	....	218	58	710	501	166	18	21
13....	61	207	203	....	....	181	96	906	413	125	108	21
14....	64	220	203	....	....	185	220	858	360	99	66	21
15....	64	225	203	....	....	192	408	842	465	72	61	21
16....	66	220	203	....	*175	168	628	906	562	75	72	23
17....	69	225	203	....	....	210	658	1020	568	66	75	36
18....	61	229	216	....	....	188	402	1150	600	108	53	39
19....	53	229	207	....	....	162	289	930	600	132	39	30
20....	48	225	203	....	....	136	194	802	574	129	30	26
21....	48	207	207	....	....	136	203	650	588	122	27	23
22....	51	203	203	....	....	138	483	568	658	99	36	21
23....	51	194	194	....	....	141	453	620	718	132	69	41
24....	48	170	225	....	....	165	321	680	770	174	78	51
25....	48	178	190	....	....	127	360	680	725	150	72	78
26....	48	178	190	....	....	136	413	477	748	162	58	75
27....	46	182	180	....	....	130	447	418	966	186	58	69
28....	41	182	170	....	....	124	628	574	658	158	58	66
29....	26	186	165	....	....	133	413	842	614	162	75	69
30....	19	186	170	....	....	100	312	1370	710	150	92	83
31....	26	....	168	....	....	98	....	1150	....	132	66	....
Total	1731	5918	5860	3937	4676	5625	7397.8	22067	18103	6258	2270	1069
Mean.	55.8	197	189	127	167	181	247	712	603	202	73.2	35.6
Max.	96	243	225	....	....	275	658	1370	966	665	162	83
Min.	19	39	165	....	....	98	8.8	256	360	66	12	14
Acre-ft.	3430	11740	11620	7810	9270	11160	14670	43770	35910	12410	4500	2120

Total run-off for water year 1936-37=168,300 acre-feet.

*Discharge measurement.

Discharge of Rio Grande River Near Monte Vista, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	92	6.0	211	160	155	171	220	1280	1760	2000	95	58
2....	46	6.0	199	160	155	215	200	502	1390	1470	118	128
3....	14	9.4	211	165	155	191	180	399	2100	1060	145	331
4....	10	10	224	165	155	191	148	534	2970	932	150	313
5....	8.6	13	225	160	155	203	72	298	3360	397	136	392
6....	8.6	13	220	160	160	180	65	434	3170	289	104	270
7....	7.8	14	207	140	160	170	72	984	2720	512	114	220
8....	7.0	21	211	135	160	141	34	703	2140	373	139	202
9....	7.0	124	207	135	170	175	26	489	1820	363	126	195
10....	6.0	98	203	130	*179	175	28	183	1820	575	118	153
11....	6.0	95	199	130	167	167	52	246	1740	543	102	210
12....	6.5	95	187	130	148	137	130	377	1840	483	118	680
13....	7.0	90	191	*138	199	130	203	313	2350	418	64	1050
14....	6.0	90	195	140	195	117	350	534	3930	494	64	667
15....	6.0	92	195	150	203	152	521	1050	3260	575	77	489
16....	6.0	98	207	156	207	127	428	1230	2460	478	50	428
17....	9.4	87	203	160	152	114	242	1370	2180	439	81	418
18....	7.8	101	200	160	130	114	289	1070	2360	428	81	354
19....	6.5	137	180	160	125	127	553	957	2350	373	73	300
20....	6.0	130	180	155	125	127	678	586	2200	363	90	254
21....	6.0	160	180	145	130	127	635	434	2200	326	92	217
22....	5.5	167	170	140	130	101	686	434	2820	273	64	202
23....	6.5	175	170	140	130	87	975	324	3710	285	41	195
24....	7.8	187	170	140	140	92	1220	680	3290	232	25	188
25....	7.0	187	160	125	140	90	1410	628	2240	150	22	220
26....	7.0	199	160	130	140	156	1330	680	2050	83	13	254
27....	7.0	228	160	140	145	171	842	993	1960	47	10	273
28....	7.0	220	159	145	145	187	635	1500	1670	206	13	239
29....	7.0	220	160	*147	....	211	860	2290	1570	188	27	202
30....	7.0	228	160	140	....	256	1280	2360	2440	83	52	202
31....	6.0	....	160	145	....	238	....	1960	....	50	43	....
Total	348.0	3300.4	5864	4526	4355	4840	14364	25822	71870	14493	2460	9304
Mean.	11.2	110	189	146	156	156	479	833	2396	468	79.4	310
Max.	92	228	225	165	207	256	1410	2360	3930	2000	150	1050
Min.	5.5	6	159	125	125	87	26	183	1390	47	10	58
Acre-ft.	690	6550	11630	8980	8640	9600	28490	51220	142600	28750	4880	18450

Total run-off for water year 1937-38=320,500 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande River at Alamosa, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	74	11	246	180	145	290	145	29	734	172	24	17
2....	74	10	222	166	145	280	111	15	563	159	19	17
3....	46	14	201	143	145	254	82	14	472	150	18	17
4....	42	35	202	135	145	240	70	31	578	96	18	16
5....	39	93	204	140	145	280	59	29	549	68	18	15
6....	40	121	199	145	155	320	56	35	397	58	21	15
7....	38	179	218	145	160	217	56	18	276	46	29	16
8....	36	189	223	145	170	244	56	24	206	38	28	16
9....	34	193	229	145	180	249	53	86	230	30	27	16
10....	29	195	186	145	185	240	49	166	228	29	24	16
11....	27	195	170	145	190	235	46	121	147	27	24	15
12....	26	206	177	145	200	232	44	105	110	30	21	15
13....	24	206	164	145	205	249	42	125	125	34	20	17
14....	23	203	170	145	210	249	38	235	97	34	17	17
15....	23	222	177	145	215	226	36	219	71	54	16	17
16....	23	229	182	145	220	235	174	244	44	53	15	17
17....	22	227	202	145	225	249	379	302	58	51	19	17
18....	21	229	201	145	230	268	376	412	54	50	17	17
19....	21	235	201	145	235	244	212	560	57	50	19	17
20....	21	235	201	145	210	208	134	362	47	48	17	17
21....	19	229	195	*147	220	188	79	266	37	47	17	17
22....	15	225	206	147	235	186	55	175	34	46	17	17
23....	14	229	218	147	240	194	110	108	33	42	17	17
24....	13	218	206	147	250	184	130	96	51	40	17	17
25....	13	208	201	147	250	202	61	105	92	44	18	17
26....	12	206	206	145	260	175	37	105	100	44	17	17
27....	13	223	189	145	270	190	29	66	139	45	18	17
28....	15	229	186	145	280	183	89	42	235	53	16	17
29....	14	233	197	145	....	183	156	82	125	34	15	17
30....	13	244	186	145	....	184	58	338	104	32	14	20
31....	12	....	166	145	....	154	....	828	....	31	17	....
Total	836	5476	6131	4544	5720	7032	3022	5343	5993	1735	594	500
Mean.	27.0	183	198	147	204	227	101	172	200	56.0	19.2	16.7
Max..	74	244	246	180	280	320	379	828	734	172	29	20
Min..	12	10	164	135	145	154	29	14	33	27	14	15
Acre-ft.	1660	10860	12160	9010	11350	13950	5990	10600	11890	3440	1180	992

Total run-off for water year 1936-37=93,080 acre-feet.

*Discharge measurement.

Discharge of Rio Grande River at Alamosa, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	20	11	230	180	165	205	150	812	916	1640	27	22
2....	19	7.0	225	180	175	230	147	760	808	1280	26	23
3....	18	6.4	220	175	175	265	133	294	612	924	25	26
4....	16	6.4	235	175	175	256	12	224	1180	607	24	25
5....	15	5.8	245	170	180	220	102	173	1690	390	22	23
6....	14	6.4	245	165	180	198	80	126	1970	221	22	23
7....	14	7.8	240	160	190	198	65	190	2050	126	22	22
8....	14	7.8	230	150	190	196	57	688	1810	85	22	22
9....	14	6.4	240	140	200	190	50	528	1360	68	20	22
10....	13	5.8	235	140	200	200	48	342	1110	74	20	22
11....	13	5.8	230	140	210	206	45	154	1120	74	20	22
12....	14	5.8	225	140	210	194	43	122	1010	68	20	24
13....	14	5.8	220	142	220	177	42	134	1120	62	20	221
14....	14	5.2	225	145	220	171	46	98	1580	60	22	460
15....	15	10	225	150	225	159	144	180	2340	60	30	230
16....	17	17	230	160	235	180	265	501	2170	71	29	131
17....	18	18	220	165	240	162	294	696	1730	71	28	107
18....	17	17	220	165	220	147	178	784	1540	67	27	125
19....	15	15	215	165	205	149	180	623	1690	59	29	97
20....	14	14	205	160	185	156	220	525	1600	53	32	73
21....	13	15	200	160	180	157	200	272	1470	55	32	61
22....	13	15	195	155	180	152	383	150	1500	53	35	51
23....	13	31	185	150	180	141	445	115	1850	53	35	46
24....	13	41	180	150	180	128	711	95	2350	52	33	42
25....	13	41	180	150	190	126	896	177	2300	49	30	38
26....	13	42	180	150	200	124	992	128	1660	46	28	36
27....	13	52	180	155	200	157	896	60	1460	43	26	34
28....	13	162	180	155	200	149	639	137	1320	40	24	32
29....	13	180	180	159	....	144	494	488	1110	37	23	31
30....	13	210	180	160	....	149	631	1110	1240	33	22	31
31....	13	....	180	165	....	175	....	1200	....	30	22	....
Total	451	973.4	6580	4876	5510	5461	8688	11886	45666	6551	797	2122
Mean.	14.5	32.4	212	157	197	176	290	383	1522	211	25.7	70.7
Max..	20	210	245	180	240	265	992	1200	2350	1640	35	460
Min..	13	5.2	180	140	165	124	42	60	612	30	20	22
Acre-ft.	895	1930	13050	9670	10930	10830	17230	23580	90580	12990	1580	4210

Total run-off for water year 1937-38=197,500 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Rio Grande River Above Mouth of Trinchera Creek, Near Las Sauces, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	128	102	327	206	160	380	221	223	956	190	28	21
2....	140	102	318	204	160	364	204	176	856	195	30	22
3....	128	112	283	185	160	367	184	199	755	228	29	26
4....	120	94	261	170	165	328	180	230	744	242	56	28
5....	117	128	265	150	170	340	190	270	759	249	32	26
6....	122	179	222	170	175	370	193	312	714	212	28	32
7....	120	216	196	175	185	436	180	355	634	170	24	27
8....	122	259	224	175	190	410	178	323	555	152	23	34
9....	126	272	232	175	195	379	158	373	492	132	24	21
10....	123	278	232	175	200	373	141	482	502	121	21	38
11....	118	278	232	175	214	367	133	519	458	105	18	36
12....	115	281	230	175	220	373	162	523	364	90	16	34
13....	114	287	228	175	225	376	197	509	326	70	15	35
14....	112	287	218	170	230	385	283	551	320	57	15	39
15....	106	294	226	170	240	373	373	616	275	52	13	37
16....	104	307	237	170	245	346	475	670	197	42	12	38
17....	102	316	261	170	255	349	717	692	137	42	12	40
18....	101	318	254	170	260	364	836	744	100	35	12	38
19....	101	318	259	170	265	358	797	805	163	31	15	36
20....	102	322	256	170	240	326	670	809	77	36	15	33
21....	104	331	261	170	270	298	598	725	77	32	14	34
22....	104	325	250	170	290	277	555	641	80	27	13	32
23....	102	322	243	168	310	270	526	587	80	21	12	29
24....	102	311	237	170	320	262	537	544	70	24	12	28
25....	104	298	232	170	335	257	458	509	67	22	11	28
26....	106	286	226	170	330	270	376	540	88	20	11	28
27....	104	281	226	165	335	247	331	576	154	20	13	28
28....	102	294	226	165	360	264	323	523	186	42	14	29
29....	104	303	224	165	....	262	379	475	240	40	13	30
30....	106	305	212	160	....	259	323	598	230	41	15	36
31....	104	....	206	160	....	252	....	809	....	33	18	....
Total	3463	7803	7498	5333	6704	10282	10878	15908	10556	2747	584	947
Mean.	112	260	242	172	229	332	363	513	352	88.6	18.8	31.6
Max.	140	331	327	206	360	436	836	809	956	249	56	40
Min.	101	94	196	150	160	247	133	176	63	20	11	21
Acre-ft.	6870	15480	14870	10580	13300	20390	21580	31550	20940	5450	1160	1880

Total run-off for water year 1936-37=164,000 acre-feet.

**Discharge of Rio Grande River Above Mouth of Trinchera Creek, Near Las Sauces, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	40	51	221	190	200	350	262	1070	1130	1400	51	43
2....	39	49	257	190	205	360	240	1230	941	1730	47	44
3....	39	47	300	190	215	360	240	1040	850	1450	49	48
4....	34	46	297	185	215	356	219	730	859	1200	67	57
5....	32	46	300	180	220	339	188	669	1350	1000	60	70
6....	31	45	311	180	230	308	223	589	1690	600	54	84
7....	31	45	339	177	240	291	217	525	1970	450	49	92
8....	31	49	336	180	240	286	121	708	2070	364	45	94
9....	30	52	340	180	250	288	110	922	1790	302	42	96
10....	32	49	340	180	265	286	102	802	1280	252	40	97
11....	31	51	300	200	280	294	90	632	1190	235	39	102
12....	34	52	300	200	300	291	83	504	1150	228	42	116
13....	38	53	300	200	330	275	83	470	1150	164	39	152
14....	38	51	300	200	370	259	83	450	1200	132	41	560
15....	38	55	280	200	370	252	135	444	1800	132	49	640
16....	42	58	250	200	350	244	342	632	2400	126	56	492
17....	47	62	230	200	330	262	447	912	2200	117	51	416
18....	45	62	200	200	315	240	403	1040	1760	117	46	396
19....	45	70	190	190	310	226	342	1060	1600	112	44	393
20....	45	64	190	190	300	230	373	941	1740	112	48	342
21....	47	65	190	185	280	230	555	821	1650	137	50	288
22....	48	65	190	180	270	232	661	624	1600	137	50	249
23....	51	66	190	180	290	230	686	518	1700	141	56	221
24....	52	87	190	180	300	217	816	454	1900	117	54	198
25....	52	100	190	170	310	206	1070	412	2450	103	50	172
26....	50	119	190	165	310	199	1240	460	2300	100	48	150
27....	51	152	190	164	315	210	1390	394	1850	86	45	152
28....	50	184	190	165	340	230	1200	373	1550	78	44	157
29....	51	144	190	170	....	219	941	497	1380	67	42	148
30....	52	178	190	180	....	226	888	793	1210	58	42	135
31....	52	....	190	190	....	249	....	1200	....	59	42	....
Total	1298	2217	7671	5741	7950	8245	13750	21916	47710	11306	1482	6204
Mean.	41.9	73.9	247	185	284	266	458	707	1590	365	47.8	207
Max.	52	184	340	200	370	360	1390	1230	2450	1730	67	640
Min.	30	45	190	164	200	199	83	373	850	58	39	43
Acre-ft.	2570	4400	15220	11390	15770	16350	27270	43470	94630	22430	2940	12310

Total run-off for water year 1937-38=268,800 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande River Near Lobatos, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	241	241	415	340	208	432	402	1470	2500	982	58	31
2....	257	279	506	320	211	462	389	1380	2510	937	46	36
3....	252	257	435	330	212	519	382	1640	2590	1130	49	39
4....	236	257	332	282	213	507	389	2100	2540	1040	61	41
5....	231	231	320	267	211	497	414	1750	2330	955	61	41
6....	241	320	300	258	217	543	427	2720	2070	848	51	42
7....	241	382	280	277	225	657	427	3020	1850	658	49	61
8....	257	428	275	277	248	670	402	2750	1650	530	42	49
9....	252	455	270	276	220	698	364	2900	1560	421	41	61
10....	252	455	260	264	*252	588	353	3380	1530	341	39	63
11....	252	455	260	260	291	580	395	3530	1410	271	34	66
12....	241	455	260	270	287	588	722	3560	1310	223	31	66
13....	220	462	260	265	277	603	1120	3530	1210	190	28	66
14....	206	470	*300	260	286	619	1550	3690	1160	155	27	63
15....	197	470	340	255	293	603	1910	3900	1070	134	31	63
16....	184	477	420	250	322	573	2300	4120	928	106	31	63
17....	188	484	470	245	334	558	2900	4180	805	85	28	61
18....	188	484	455	240	334	573	3030	4170	722	82	28	61
19....	197	484	465	235	351	588	2520	4220	666	66	30	58
20....	215	484	465	*230	349	537	2440	4100	588	61	33	54
21....	201	484	465	230	299	494	2290	3830	588	51	31	51
22....	215	477	470	230	379	460	2480	3380	603	38	26	51
23....	226	470	490	230	389	460	2690	3860	619	34	28	51
24....	226	448	520	230	387	427	2590	3030	596	34	27	46
25....	220	422	470	*230	*395	414	2000	2790	603	41	22	44
26....	215	408	450	230	377	434	1740	2440	772	42	24	44
27....	231	408	380	225	431	402	1900	2010	1200	36	22	41
28....	231	422	*340	220	435	408	2230	1810	1240	36	25	39
29....	226	435	400	220	....	421	2180	1680	1170	61	26	46
30....	231	441	320	215	....	421	1800	2060	1090	58	24	58
31....	231	....	340	210	....	427	....	2270	....	56	26	....
Total	7001	12445	11733	7871	8433	16163	44736	91270	39480	9702	1089	1556
Mean.	226	415	378	254	301	521	1491	2944	1316	313	35.1	51.9
Max..	257	484	520	340	435	698	3030	4220	2590	1130	61	66
Min..	184	231	260	210	208	402	353	1380	588	34	22	31
Acre-ft.	13890	24680	23270	15610	16730	32060	88730	181030	78310	19240	2160	3090

Total run-off for water year 1936-37=498,800 acre-feet.

*Discharge measurement.

Discharge of Rio Grande River Near Lobatos, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	66	90	276	200	235	376	353	3450	3080	2060	76	54
2....	68	90	335	200	235	414	341	3830	2780	2220	68	58
3....	66	93	335	200	230	460	335	2940	2610	1900	96	68
4....	66	88	382	190	235	454	318	2340	2470	1550	116	76
5....	66	88	382	220	230	427	302	1830	2880	1230	113	90
6....	61	85	364	195	230	395	261	1540	3340	955	106	99
7....	61	99	293	180	240	364	181	1440	3610	708	99	120
8....	58	90	350	190	245	364	247	1440	3700	515	99	123
9....	63	93	350	200	250	359	181	1590	3420	408	96	123
10....	63	93	350	200	260	364	177	1490	2760	359	93	127
11....	74	93	320	210	310	364	159	1310	2540	318	85	138
12....	79	96	320	217	305	370	147	1150	2360	318	79	151
13....	85	96	320	220	330	370	147	1200	2380	282	82	172
14....	88	99	320	230	335	370	147	1290	2750	218	79	324
15....	88	99	320	230	330	347	204	1680	2970	186	85	627
16....	85	96	280	240	330	335	389	2330	3560	168	88	530
17....	88	106	280	240	345	341	580	2860	3720	151	103	440
18....	88	110	260	232	260	341	627	3040	3090	134	88	402
19....	90	106	200	235	300	318	635	2970	2780	130	79	402
20....	94	110	200	230	270	318	1040	2620	2730	143	76	376
21....	92	116	200	230	295	330	1620	2160	2510	134	76	330
22....	94	116	200	210	300	330	2300	1930	2310	147	71	297
23....	95	113	200	215	340	318	2510	1710	2380	159	71	276
24....	96	120	200	200	390	318	2840	1540	2710	147	76	266
25....	96	143	200	195	380	302	3260	1530	3040	127	74	247
26....	99	147	200	220	400	282	3530	1720	3240	116	68	213
27....	99	181	200	220	400	222	3800	1910	2640	113	61	204
28....	96	190	200	220	370	324	3210	2070	2260	103	58	209
29....	93	195	200	220	....	335	2820	2370	2020	93	56	204
30....	96	218	200	230	....	335	3040	2850	1910	85	54	190
31....	96	....	200	235	....	335	....	3240	....	74	51	....
Total	2551	3450	8557	6654	8380	10942	35688	65370	84550	15249	2522	6936
Mean.	82.3	115	276	215	299	353	1190	2109	2818	492	81.4	231
Max..	99	218	393	240	400	460	3800	3830	3720	2220	116	627
Min..	58	85	200	180	230	282	134	1150	1910	74	51	54
Acre-ft.	5660	6840	16970	13200	16620	21700	70790	129700	167700	30250	5000	13760

Total run-off for water year 1937-38=497,600 acre feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Clear Creek Below Continental Reservoir, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	....	....	....	....	....	10	90	50	25	22	16
2....	14	....	....	....	....	....	10	117	47	23	18	16
3....	16	....	....	....	....	....	10	196	45	28	19	14
4....	15	....	....	....	....	....	10	278	40	26	19	14
5....	15	....	....	....	....	....	10	246	34	27	18	15
6....	12	....	....	....	....	....	10	184	34	29	16	14
7....	12	....	....	....	....	....	10	141	36	23	16	20
8....	12	....	....	....	....	....	10	159	35	19	24	25
9....	12	....	....	....	....	....	10	184	37	20	25	24
10....	12	....	....	....	....	....	10	160	37	21	21	23
11....	11	....	....	....	....	....	10	115	35	23	16	22
12....	11	....	....	....	....	....	10	81	34	25	14	16
13....	11	....	....	....	....	....	10	27	30	25	14	16
14....	11	....	....	....	....	....	10	75	26	25	14	16
15....	11	....	....	....	....	....	18	72	26	25	13	16
16....	11	....	....	....	....	....	45	63	26	32	13	9.4
17....	11	....	....	....	....	....	49	59	26	39	14	9.4
18....	10	....	....	....	....	....	52	59	26	39	16	9.4
19....	10	....	....	....	....	....	53	59	26	34	16	9.4
20....	10	....	....	....	....	....	82	51	26	26	16	9.4
21....	10	....	....	....	....	....	128	42	35	30	24	9.4
22....	10	....	....	....	....	....	138	39	42	37	27	9.4
23....	10	....	....	....	....	....	126	38	38	37	19	9.4
24....	10	....	....	....	....	....	117	38	38	37	18	9.4
25....	10	....	....	....	....	....	108	38	38	37	22	9.4
26....	10	....	....	....	....	....	118	42	39	37	24	9.4
27....	10	....	....	....	....	....	152	41	41	37	24	9.4
28....	10	....	....	....	....	....	163	42	40	37	16	9.4
29....	10	....	....	....	....	....	102	43	40	37	9.4	11
30....	10	....	....	....	....	....	75	46	41	36	9.4	14
31....	10	....	....	....	....	....	....	49	....	34	12	....
Total	351	300	310	....	....	....	1666	2874	1068	930	548.8	414.2
Mean.	11.3	10	10	....	....	....	55.5	92.7	35.6	30.0	17.7	13.8
Max..	16	....	....	....	....	....	163	278	50	39	27	25
Min..	10	....	....	....	....	....	10	27	26	19	9.4	9.4
Acre-ft.	696	595	615	....	....	....	3300	5700	2120	1840	1090	822

Total run-off for period=16,778 acre-feet.

Discharge of Clear Creek Below Continental Reservoir, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	13	13	13	13	13	13	46	14	105	27	36
2....	14	13	13	13	13	13	13	75	78	67	34	36
3....	14	13	13	13	13	13	13	47	82	62	38	28
4....	14	13	13	13	13	13	13	47	55	54	41	20
5....	14	13	13	13	13	13	13	47	79	51	42	20
6....	14	13	13	13	13	13	13	47	129	39	42	20
7....	14	13	13	13	13	13	13	44	129	39	41	20
8....	14	13	13	13	13	13	13	40	131	63	41	20
9....	14	13	13	13	13	13	13	40	131	79	41	20
10....	14	13	13	13	13	13	13	41	126	113	32	20
11....	14	13	13	13	13	13	13	41	126	158	30	21
12....	14	13	13	13	13	13	13	41	125	162	32	20
13....	14	13	13	13	13	13	13	44	115	164	34	20
14....	14	13	13	13	13	13	13	77	130	177	34	21
15....	12	13	13	13	13	13	13	124	131	184	34	21
16....	12	13	13	13	13	13	13	144	134	187	39	21
17....	12	13	13	13	13	13	13	187	119	187	42	21
18....	12	13	13	13	13	13	13	194	114	141	39	20
19....	12	13	13	13	13	13	13	120	94	111	35	20
20....	12	13	13	13	13	13	13	110	81	101	30	21
21....	12	13	13	13	13	13	13	125	85	65	23	22
22....	12	13	13	13	13	13	13	129	88	44	18	22
23....	12	13	13	13	13	13	13	134	104	48	16	22
24....	12	13	13	13	13	13	13	143	115	49	14	23
25....	13	13	13	13	13	13	13	158	115	34	11	18
26....	13	13	13	13	13	13	13	96	171	114	25	14
27....	13	13	13	13	13	13	13	103	211	113	32	16
28....	13	13	13	13	13	13	13	157	182	114	34	15
29....	13	13	13	13	....	13	9.8	69	115	34	15	17
30....	13	13	13	13	....	13	8.5	14	114	29	30	17
31....	13	....	13	13	....	13	....	14	....	25	36	....
Total	407	390	403	403	364	403	699.3	2906	3200	2663	936	636
Mean.	13.1	13	13	13	13	13	23.3	93.7	107	85.9	30.2	21.2
Max..	14	....	....	....	....	....	157	211	134	187	42	36
Min..	12	....	....	....	....	....	8.5	14	14	25	11	16
Acre-ft.	807	774	799	799	722	799	1390	5760	6350	5280	1850	1260

Total run-off for water year 1937-38=26,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of South Fork Rio Grande River at South Fork, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	71	72	43	.....	.....	.....	67	353	1040	472	79	58
2.....	67	60	40	.....	.....	.....	75	464	1080	452	76	49
3.....	63	59	42	.....	.....	.....	70	572	1060	368	78	49
4.....	61	71	44	.....	.....	.....	67	639	995	311	85	51
5.....	59	76	41	.....	.....	*49	68	675	896	281	77	50
6.....	66	71	40	.....	.....	.....	73	598	778	257	87	53
7.....	63	68	47	.....	.....	.....	68	603	737	232	79	59
8.....	68	61	43	.....	.....	.....	70	737	783	214	71	55
9.....	70	61	44	.....	.....	.....	76	891	794	196	68	50
10.....	64	68	45	.....	.....	.....	86	931	768	216	72	46
11.....	59	65	45	.....	.....	.....	124	966	826	260	68	43
12.....	56	64	45	.....	.....	.....	160	995	869	214	61	43
13.....	54	69	43	.....	.....	.....	196	1120	842	187	59	42
14.....	52	67	44	.....	.....	.....	272	1270	809	173	56	40
15.....	50	67	45	.....	*46	.....	392	1380	773	162	56	40
16.....	50	69	44	.....	.....	.....	505	1490	804	142	56	40
17.....	49	70	41	.....	.....	.....	448	1670	874	129	56	41
18.....	48	69	45	.....	.....	.....	350	1640	908	119	56	40
19.....	48	66	45	.....	.....	.....	376	1580	863	109	58	39
20.....	69	63	46	.....	.....	.....	388	1550	853	102	52	39
21.....	62	64	46	.....	.....	.....	456	1470	949	96	50	38
22.....	56	60	50	.....	.....	.....	501	1410	1050	92	48	39
23.....	62	55	50	.....	.....	.....	428	1360	1050	89	48	41
24.....	58	49	50	.....	.....	.....	336	1240	966	87	45	40
25.....	61	47	48	.....	.....	.....	356	1020	920	85	44	38
26.....	62	44	47	.....	.....	.....	476	847	920	88	55	37
27.....	58	44	46	.....	.....	.....	531	815	778	94	57	37
28.....	57	45	50	.....	.....	.....	428	826	639	94	56	36
29.....	60	44	37	.....	.....	.....	336	914	554	92	47	39
30.....	73	42	37	.....	.....	.....	314	1010	460	89	49	93
31.....	74	43	.....	.....	.....	.....	.....	1050	.....	79	87	.....
Total	1870	1830	1376	.....	.....	.....	8093	32086	25638	5581	1936	1365
Mean..	60.3	61.0	44.1	44	46	52	270	1035	855	180	62.5	45.5
Max..	74	76	50	.....	.....	.....	531	1670	1070	472	87	93
Min..	48	42	37	.....	.....	.....	67	373	460	79	44	37
Acre-ft.	3710	3630	2730	2700	2750	3220	16050	63640	50850	11070	3840	2710

Total run-off for water year 1936-37=166,900 acre-feet.

*Discharge measurement.

**Discharge of South Fork, Rio Grande River, Near South Fork, Colo., for Year Ending
Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	86	45	45	.....	.....	.....	80	805	1620	721	120	83
2.....	68	43	56	.....	.....	.....	75	594	1600	651	110	113
3.....	60	42	53	.....	.....	.....	80	498	1620	576	101	108
4.....	57	42	51	.....	.....	.....	87	410	1620	507	104	116
5.....	54	41	53	.....	.....	.....	99	354	1560	446	111	103
6.....	50	40	50	.....	.....	.....	99	324	1500	391	94	92
7.....	48	52	45	.....	.....	.....	87	298	1450	347	94	94
8.....	47	45	40	.....	.....	*45	80	275	1380	318	92	106
9.....	47	42	35	.....	.....	.....	91	270	1250	384	84	92
10.....	46	47	35	.....	.....	.....	111	256	1200	430	76	87
11.....	46	46	35	.....	*37	.....	136	278	1080	426	89	287
12.....	47	42	35	.....	.....	.....	180	324	1170	399	101	358
13.....	50	41	35	.....	.....	.....	207	369	1520	369	150	287
14.....	48	42	35	.....	.....	.....	202	554	1380	354	136	217
15.....	56	42	35	*35	.....	.....	163	783	1230	290	120	196
16.....	73	39	35	.....	.....	.....	146	954	1190	227	94	198
17.....	61	42	35	.....	.....	.....	185	988	1170	205	81	198
18.....	58	44	30	.....	.....	.....	290	977	1140	193	77	165
19.....	46	40	25	.....	.....	.....	410	965	1050	187	70	152
20.....	49	49	20	.....	.....	.....	482	805	1010	193	65	136
21.....	51	41	25	.....	.....	.....	576	800	1100	178	63	131
22.....	50	38	30	.....	.....	.....	686	816	1240	152	61	127
23.....	52	38	30	.....	.....	.....	773	768	1290	146	59	118
24.....	51	41	33	.....	.....	.....	832	854	988	129	61	115
25.....	50	41	33	.....	.....	.....	875	914	892	125	64	116
26.....	49	43	33	.....	.....	.....	757	1040	875	123	62	110
27.....	49	40	33	.....	.....	.....	656	1250	875	140	64	110
28.....	48	42	33	*38	.....	.....	731	1510	821	219	60	100
29.....	46	42	*33	.....	.....	.....	827	1680	1150	156	64	95
30.....	45	43	33	.....	.....	.....	892	1720	861	132	86	85
31.....	47	.....	33	.....	.....	.....	.....	1640	.....	125	73	.....
Total	1635	1275	1132	1116	1120	1366	10895	24068	36835	9239	2686	4295
Mean..	52.7	42.5	36.5	36.0	40.0	41.1	363	776	1228	298	86.6	143
Max..	86	52	56	.....	.....	.....	892	1720	1620	721	150	358
Min..	45	38	20	.....	.....	.....	75	256	821	123	59	83
Acre-ft.	3240	2530	2250	2210	2220	2710	21610	47740	73060	18330	5330	8520

Total run-off for water year 1937-38=189,800 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Pinos Creek Near Del Norte, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	11	....	....	....	....	....	45	133	47	12	9.0
2....	14	13	....	....	....	....	....	59	135	48	13	7.9
3....	14	12	....	....	....	....	....	74	134	40	13	12
4....	12	14	....	....	....	....	....	86	126	36	13	13
5....	12	16	....	....	....	....	....	91	114	34	15	10
6....	13	14	....	....	....	....	....	81	106	33	19	10
7....	14	16	....	....	....	....	....	88	103	30	14	16
8....	14	15	....	....	....	....	....	122	104	28	12	12
9....	15	15	....	....	....	....	....	139	100	28	11	10
10....	14	16	....	....	....	....	....	144	97	27	9.9	9.4
11....	13	16	....	....	....	....	....	144	96	33	9.0	8.3
12....	12	14	....	....	....	....	....	154	95	29	8.6	8.3
13....	11	12	....	....	....	....	....	164	92	27	8.6	8.3
14....	10	10	....	....	....	....	....	172	92	26	8.6	8.6
15....	9.2	10	....	....	....	....	Apr. 17	179	89	24	8.6	8.3
16....	9.2	14	....	....	....	....	to 30	188	86	22	9.0	8.6
17....	9.7	16	....	....	....	....	46	203	83	21	11	9.0
18....	9.2	14	....	....	....	....	45	202	82	20	13	8.3
19....	9.2	16	....	....	....	....	43	202	80	19	9.9	7.9
20....	12	14	....	....	....	....	44	191	76	17	8.6	7.9
21....	8.9	12	....	....	....	....	58	177	76	16	8.3	7.8
22....	7.6	15	....	....	....	....	67	174	72	14	7.5	7.1
23....	7.9	14	....	....	....	....	56	168	71	14	7.5	7.9
24....	7.6	12	....	....	....	....	46	151	66	15	7.5	6.7
25....	8.6	11	....	....	....	....	44	134	64	15	7.1	5.6
26....	9.2	10	....	....	....	....	56	122	62	15	7.9	6.0
27....	9.7	8	....	....	....	....	69	119	58	16	9.0	7.1
28....	11	10	....	....	....	....	56	114	52	19	9.4	7.5
29....	12	5	....	....	....	....	43	135	52	18	7.5	8.6
30....	11	8	....	....	....	....	40	137	49	15	10	19
31....	9.2	....	....	....	....	....	....	128	....	13	14	....
Total	343.2	383	....	....	....	....	713	4287	2645	759	322.5	276.2
Mean.	11.1	12.8	....	....	....	....	50.9	138	88.2	24.5	10.4	9.21
Max..	15	16	....	....	....	....	69	203	135	48	19	19
Min..	7.6	5	....	....	....	....	40	45	49	13	7.1	5.6
Acre-ft.	681	760	....	....	....	....	1410	8500	5250	1510	640	548

Total run-off for period=19,299 acre-feet.

Discharge of Pinos Creek Near Del Norte, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	13	....	....	....	....	....	....	137	205	62	18	15
2....	11	....	....	....	....	....	....	104	200	56	22	25
3....	9.9	....	....	....	....	....	....	89	193	50	20	25
4....	9.0	....	....	....	....	....	....	77	191	46	20	23
5....	8.6	....	....	....	....	....	....	65	181	37	18	20
6....	8.3	....	....	....	....	....	....	57	178	36	17	16
7....	8.3	....	....	....	....	....	....	50	175	33	18	17
8....	8.3	....	....	....	....	....	....	68	167	29	18	17
9....	7.9	....	....	....	....	....	....	46	158	29	17	14
10....	7.9	....	....	....	....	....	....	46	143	30	17	18
11....	7.9	....	....	....	....	....	Apr. 13	50	137	30	23	41
12....	8.6	....	....	....	....	....	to 30	56	143	30	24	26
13....	8.6	....	....	....	....	....	36	67	152	34	26	21
14....	8.6	....	....	....	....	....	38	85	135	50	20	18
15....	9.4	....	....	....	....	....	28	137	131	46	18	18
16....	9.9	....	....	....	....	....	23	158	125	41	15	18
17....	9.0	....	....	....	....	....	28	159	120	32	13	17
18....	8.6	....	....	....	....	....	43	151	114	32	12	16
19....	8.4	....	....	....	....	....	65	134	110	36	11	16
20....	8.0	....	....	....	....	....	86	128	105	37	11	15
21....	7.5	....	....	....	....	....	96	133	104	33	10	15
22....	7.5	....	....	....	....	....	115	122	102	28	9.9	15
23....	8.6	....	....	....	....	....	134	115	97	26	9.9	14
24....	8.3	....	....	....	....	....	147	125	88	23	9.9	14
25....	8.3	....	....	....	....	....	159	131	81	22	9.5	13
26....	7.5	....	....	....	....	....	144	143	80	22	9.5	13
27....	7.1	....	....	....	....	....	119	175	80	23	9.2	12
28....	8.6	....	....	....	....	....	121	217	77	30	9.2	12
29....	6.4	....	....	....	....	....	140	226	85	23	9.9	11
30....	5.6	....	....	....	....	....	170	196	69	20	10	11
31....	5.6	....	....	....	....	....	....	184	....	18	11	....
Total	260.2	....	....	....	....	....	1692	3631	3926	1044	466.0	526
Mean.	8.39	....	....	....	....	....	94.0	117	131	33.7	15.0	17.5
Max..	13	....	....	....	....	....	170	226	205	62	26	41
Min..	5.6	....	....	....	....	....	23	46	69	18	9.2	11
Acre-ft.	516	....	....	....	....	....	3360	7200	7790	2070	924	1040

Total run-off during period=22,900 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of San Francisco Creek Near Del Norte, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.9	1.8	....	....	....	....	....	10	12	2.1	1.6	0.8
2....	2.9	1.0	....	....	....	....	....	12	12	1.6	1.9	0.9
3....	2.7	1.0	....	....	....	....	....	14	12	1.6	1.2	1.9
4....	2.7	1.5	....	....	....	....	....	16	12	0.9	1.4	2.4
5....	3.1	2.0	....	....	....	....	....	15	12	1.2	2.1	1.9
6....	3.5	3.0	....	....	....	....	....	13	11	1.4	3.0	2.6
7....	3.1	3.0	....	....	....	....	....	14	11	3.0	1.6	3.0
8....	2.7	3.0	....	....	....	....	....	17	11	3.9	1.2	2.4
9....	2.5	2.5	....	....	....	....	....	17	10	3.9	1.2	1.9
10....	2.7	2.5	....	....	....	....	....	18	9.0	3.9	1.2	1.9
11....	2.5	2.5	....	....	....	....	....	17	7.0	4.4	1.2	1.2
12....	2.5	2.0	....	....	....	....	....	21	5.2	3.5	1.2	1.6
13....	2.2	2.0	....	....	....	....	....	27	5.2	3.5	1.4	1.6
14....	1.8	2.0	....	....	....	....	....	21	5.2	3.5	1.4	1.6
15....	1.8	1.5	....	....	....	....	Apr. 17	22	5.2	3.5	1.4	1.6
16....	1.7	1.5	....	....	....	....	to 30	24	5.2	3.5	1.4	1.6
17....	1.7	1.5	....	....	....	....	7.0	29	5.2	3.5	1.4	1.6
18....	1.5	1.5	....	....	....	....	7.5	32	4.8	3.0	1.4	1.6
19....	2.0	1.0	....	....	....	....	7.0	34	4.8	3.0	1.4	1.4
20....	2.0	1.0	....	....	....	....	7.5	23	4.4	3.5	1.4	1.4
21....	2.0	1.0	....	....	....	....	8.5	18	3.9	3.5	1.4	1.2
22....	1.8	1.5	....	....	....	....	9.5	16	2.1	3.5	1.4	1.6
23....	2.0	1.5	....	....	....	....	7.5	15	2.1	3.5	1.4	1.6
24....	2.0	1.5	....	....	....	....	9.5	13	2.1	3.5	0.9	1.6
25....	2.4	1.5	....	....	....	....	9.5	13	2.1	3.0	1.6	1.6
26....	1.8	2.0	....	....	....	....	8.5	12	2.6	2.4	1.9	1.6
27....	1.7	2.0	....	....	....	....	10	12	3.0	2.4	2.1	1.6
28....	1.7	2.0	....	....	....	....	9.5	12	3.0	3.5	1.4	1.4
29....	1.7	2.0	....	....	....	....	10	12	2.6	3.9	1.2	2.1
30....	2.0	1.5	....	....	....	....	9.0	12	2.1	3.0	2.1	3.5
31....	1.7	....	....	....	....	....	....	12	....	1.4	1.9	....
Total	69.3	54.3	....	....	....	....	120.5	543.0	189.8	92.0	47.3	52.7
Mean	2.24	1.81	....	....	....	....	8.61	17.5	6.33	2.97	1.53	17.6
Max.	3.5	3.0	....	....	....	....	10	34	12	4.4	3.0	3.5
Min.	1.5	1.0	....	....	....	....	7.0	10	2.1	0.9	0.9	0.8
Acre-ft.	137	108	....	....	....	....	239	1080	376	182	94	105

Total run-off for period=2,321 acre-feet.

Discharge of San Francisco Creek Near Del Norte, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.4	....	....	....	....	....	....	19	33	7.7	3.1	3.5
2....	1.2	....	....	....	....	....	....	16	29	7.1	3.5	6.3
3....	0.7	....	....	....	....	....	....	15	24	7.1	3.9	6.3
4....	0.7	....	....	....	....	....	....	13	24	6.7	3.5	7.1
5....	0.7	....	....	....	....	....	....	11	19	6.7	3.1	6.3
6....	0.7	....	....	....	....	....	....	10	22	7.1	3.1	5.5
7....	0.7	....	....	....	....	....	....	9.5	19	6.7	3.9	7.1
8....	0.7	....	....	....	....	....	....	13	19	6.3	3.5	5.9
9....	0.7	....	....	....	....	....	....	7.1	15	5.9	3.1	5.5
10....	0.7	....	....	....	....	....	....	8.3	14	5.9	2.8	6.3
11....	0.7	....	....	....	....	....	....	9.5	13	5.9	3.1	7.7
12....	0.9	....	....	....	....	....	....	11	14	4.7	3.5	7.7
13....	1.2	....	....	....	....	....	....	14	15	5.5	3.9	7.1
14....	1.4	....	....	....	....	....	....	18	12	6.3	2.6	7.1
15....	1.4	....	....	....	....	....	....	23	12	5.9	2.6	7.1
16....	1.4	....	....	....	....	....	....	26	12	6.3	2.6	7.1
17....	1.6	....	....	....	....	....	....	29	12	5.1	2.8	6.7
18....	1.2	....	....	....	....	....	....	29	12	4.7	2.6	6.7
19....	1.2	....	....	....	....	....	....	24	12	5.1	2.3	6.7
20....	1.2	....	....	....	....	....	Apr. 22	26	11	5.5	2.6	6.3
21....	1.2	....	....	....	....	....	to 30	22	11	4.7	2.6	6.7
22....	1.2	....	....	....	....	....	7.1	20	11	4.7	2.6	6.3
23....	1.4	....	....	....	....	....	10	19	11	4.7	2.3	5.9
24....	1.4	....	....	....	....	....	11	21	10	4.7	2.3	5.1
25....	1.2	....	....	....	....	....	13	25	10	4.3	2.3	5.1
26....	1.2	....	....	....	....	....	14	26	9.5	4.3	2.3	4.7
27....	1.2	....	....	....	....	....	13	32	8.9	4.7	2.3	4.7
28....	0.9	....	....	....	....	....	13	37	8.9	4.7	2.3	3.5
29....	0.7	....	....	....	....	....	14	41	9.5	4.3	2.3	2.8
30....	0.4	....	....	....	....	....	19	38	8.3	3.9	2.1	2.6
31....	0.4	....	....	....	....	....	....	38	....	3.5	3.1	....
Total	31.6	....	....	....	....	....	114.1	650.4	441.1	170.7	88.6	177.4
Mean	1.02	....	....	....	....	....	12.7	21.0	14.7	5.51	2.86	5.91
Max.	1.6	....	....	....	....	....	19	41	33	7.7	3.9	7.7
Min.	0.4	....	....	....	....	....	7.1	7.1	8.3	3.5	2.1	2.6
Acre-ft.	63	....	....	....	....	....	226	1290	875	339	176	352

Total run-off during period=3,321 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rock Creek Near Monte Vista, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	8.4	7.3	....	....	....	....	....	28	37	20	4.6	4.8
2....	7.3	5.8	....	....	....	....	....	34	36	18	4.1	4.6
3....	7.3	4.3	....	....	....	....	....	37	38	16	3.8	4.3
4....	7.3	7.0	....	....	....	....	....	40	35	14	4.3	5.6
5....	6.7	8.0	....	....	....	....	....	44	33	12	5.4	4.8
6....	7.3	8	....	....	....	....	....	40	31	12	6.4	5.1
7....	7.3	7	....	....	....	....	....	41	30	12	5.4	9.1
8....	8.0	7	....	....	....	....	....	56	29	11	4.6	6.7
9....	8.0	7	....	....	....	....	....	69	28	10	4.6	5.4
10....	8.0	7	....	....	....	....	....	69	27	9.8	4.3	4.8
11....	7.0	7	....	....	....	....	Apr. 13	64	27	13	4.1	4.8
12....	6.4	6.4	....	....	....	....	to 30	67	27	12	4.1	4.8
13....	5.8	7.0	....	....	....	....	35	68	27	10	4.3	5.1
14....	5.5	7.3	....	....	....	....	40	66	26	11	4.8	4.3
15....	5.8	7.7	....	....	....	....	45	68	25	9.8	4.8	3.8
16....	6.1	8.0	....	....	....	....	50	68	24	8.5	4.6	3.8
17....	5.8	8.0	....	....	....	....	48	70	24	7.9	4.8	3.8
18....	4.6	8.4	....	....	....	....	34	66	23	7.6	6.4	3.6
19....	4.6	7.7	....	....	....	....	33	64	23	7.0	5.4	3.3
20....	6.4	7.3	....	....	....	....	32	61	23	6.7	5.1	3.3
21....	6.1	8.0	....	....	....	....	30	56	23	6.4	4.8	3.3
22....	4.9	6.7	....	....	....	....	41	54	21	6.1	4.8	3.6
23....	6.4	5.2	....	....	....	....	39	51	21	6.1	4.8	3.6
24....	8.0	6.1	....	....	....	....	31	48	21	6.1	4.8	3.3
25....	10	6.1	....	....	....	....	30	44	21	6.1	8.2	3.3
26....	8.4	4.6	....	....	....	....	38	39	21	5.9	6.1	3.3
27....	9.1	5.5	....	....	....	....	42	36	20	5.6	6.4	3.1
28....	11	6.1	....	....	....	....	38	35	19	7.0	5.4	3.1
29....	11	5.8	....	....	....	....	32	41	18	7.6	5.4	3.1
30....	8.4	5.8	....	....	....	....	28	39	18	6.4	7.9	5.9
31....	8.0	....	....	....	....	....	....	37	....	5.1	7.3	....
Total	224.9	203.1	....	....	....	....	666	....	776	296.7	161.8	131.4
Mean.	7.25	6.77	....	....	....	....	37.0	51.6	25.9	9.57	5.22	4.38
Max..	11	8.4	....	....	....	....	50	70	38	20	8.2	9.1
Min..	4.6	4.3	....	....	....	....	28	28	18	5.1	3.8	3.1
Acre-ft.	446	403	....	....	....	....	1320	3170	1540	588	321	261

Total run-off for period=8,049 acre-feet.

Discharge of Rock Creek Near Monte Vista, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.0	....	....	....	....	....	5.1	71	68	23	8.8	8.2
2....	6.0	....	....	....	....	....	7.3	56	67	22	8.8	17
3....	5.0	....	....	....	....	....	6.7	49	64	21	8.8	12
4....	5.0	....	....	....	....	....	4.8	40	59	20	8.8	14
5....	5.0	....	....	....	....	....	5.9	34	56	19	8.5	11
6....	5.0	....	....	....	....	....	6.4	32	57	18	8.2	11
7....	5.0	....	....	....	....	....	6.1	28	57	16	9.1	12
8....	4.0	....	....	....	....	....	7.3	27	54	15	8.5	12
9....	4.0	....	....	....	....	....	11	26	50	14	7.9	11
10....	4.0	....	....	....	....	....	9.8	25	48	14	8.8	13
11....	4.0	....	....	....	....	....	13	28	45	15	9.1	17
12....	4.0	....	....	....	....	....	16	32	46	14	8.8	15
13....	4.0	....	....	....	....	....	16	38	45	17	8.8	13
14....	3.6	....	....	....	....	....	15	51	41	19	7.3	12
15....	3.8	....	....	....	....	....	10	67	39	17	6.7	12
16....	4.1	....	....	....	....	....	9.4	73	38	15	6.4	12
17....	3.6	....	....	....	....	....	12	72	36	16	6.1	10
18....	3.6	....	....	....	....	....	19	66	36	15	5.9	9.8
19....	2.6	....	....	....	....	....	28	62	35	16	5.4	9.4
20....	3.3	....	....	....	....	....	38	56	34	15	5.1	8.8
21....	3.6	....	....	....	....	....	47	56	33	13	4.6	9.1
22....	3.3	....	....	....	....	....	59	53	33	13	4.6	9.1
23....	3.3	....	....	....	....	Mar. 25	67	49	34	12	4.3	8.2
24....	3.3	....	....	....	....	to 31	74	51	31	12	5.4	8.2
25....	3.1	....	....	....	....	5.6	80	57	30	12	4.1	7.3
26....	3.1	....	....	....	....	5.6	80	62	28	12	3.8	7.0
27....	2.9	....	....	....	....	6.1	66	70	26	13	3.8	6.7
28....	2.9	....	....	....	....	4.6	61	82	27	13	4.8	6.7
29....	2.6	....	....	....	....	5.9	66	86	26	11	6.1	6.1
30....	2.6	....	....	....	....	4.6	74	74	24	10	4.6	5.9
31....	2.6	....	....	....	....	5.9	....	68	....	9.4	7.6	....
Total	118.9	....	....	....	....	38.3	920.8	1641	1267	471.4	209.5	314.5
Mean.	3.84	....	....	....	....	5.47	30.7	52.9	42.2	15.2	6.76	10.5
Max..	6.0	....	....	....	....	6.1	80	86	68	23	9.1	17
Min..	2.6	....	....	....	....	4.6	4.8	25	24	9.4	3.8	5.9
Acre-ft.	236	....	....	....	....	76	1830	3250	2510	935	416	624

Total run-off for period=9,877 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Alamosa River Above Terrace Reservoir, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	46	35	....	....	....	....	30	166	575	301	57	44
2....	46	32	....	....	....	....	30	280	581	314	53	38
3....	50	26	*17	....	....	....	30	409	537	256	53	38
4....	44	44	....	....	....	....	45	449	506	223	52	40
5....	40	57	....	....	....	....	50	516	433	206	54	40
6....	43	50	....	....	....	....	40	454	385	186	68	41
7....	37	43	....	....	....	....	25	464	394	161	54	61
8....	44	34	....	....	....	....	40	663	454	148	60	45
9....	49	31	....	....	....	....	40	747	438	136	50	40
10....	44	35	....	....	....	....	40	700	449	130	46	37
11....	38	35	....	....	....	....	40	713	501	164	44	34
12....	37	34	....	....	....	....	40	747	470	146	39	36
13....	37	32	....	....	....	....	106	812	433	130	38	32
14....	33	32	....	....	....	....	172	922	444	124	39	30
15....	34	34	....	....	....	....	237	948	423	113	40	30
16....	33	36	....	....	....	....	310	898	438	106	50	30
17....	32	38	....	....	....	....	260	966	480	100	48	30
18....	31	37	....	....	....	....	177	1000	480	96	48	29
19....	32	40	....	....	....	....	180	966	449	92	46	29
20....	38	35	....	....	....	....	183	906	433	82	40	28
21....	40	34	....	....	....	....	288	835	428	77	38	27
22....	37	31	....	....	....	....	323	842	414	72	37	28
23....	40	26	....	....	....	....	288	797	409	68	35	29
24....	36	25	....	....	....	....	183	632	375	65	34	28
25....	36	23	....	....	....	....	183	470	366	57	36	27
26....	36	23	....	....	....	....	280	414	370	54	43	25
27....	38	34	....	....	....	....	385	418	319	65	44	25
28....	28	30	....	....	....	....	288	438	272	81	45	25
29....	26	29	....	....	....	....	195	501	276	70	38	30
30....	36	22	....	....	....	....	161	490	268	67	41	43
31....	32	....	....	....	....	....	....	522	....	61	70	....
Total	1167	1017	....	....	....	....	4647	20085	12800	3951	1440	1019
Mean.	37.6	33.9	....	....	....	....	155	648	427	127	46.5	34.0
Max..	50	57	....	....	....	....	385	1000	581	314	70	61
Min..	26	22	....	....	....	....	25	166	268	54	34	25
Acre-ft.	2310	2020	....	....	....	....	9220	39840	25390	7840	2860	2020

Total run-off for period=91,500 acre-feet.

*Discharge measurement.

Discharge of Alamosa River Above Terrace Reservoir for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	38	20	....	....	....	....	20	603	939	409	105	67
2....	38	18	....	....	....	....	20	399	898	375	90	102
3....	37	18	....	....	....	....	20	323	874	342	80	90
4....	36	18	....	....	....	....	25	252	975	319	82	94
5....	36	16	....	....	....	....	30	209	898	264	80	84
6....	35	16	....	....	....	....	30	190	820	219	75	70
7....	35	19	....	....	....	....	35	169	797	202	70	72
8....	34	15	....	....	....	....	43	156	733	186	66	75
9....	34	14	....	....	....	....	46	156	663	172	74	64
10....	32	16	....	....	....	....	60	148	632	164	70	64
11....	31	16	....	....	....	....	79	158	598	148	86	175
12....	31	....	....	....	....	....	106	190	675	148	80	146
13....	34	....	....	....	....	....	113	216	754	143	110	124
14....	33	....	....	....	....	....	117	409	650	146	100	100
15....	33	....	....	....	....	....	92	615	632	160	90	88
16....	37	....	....	....	....	....	75	754	632	180	76	94
17....	34	....	....	....	....	....	81	789	638	140	64	86
18....	34	....	....	....	....	....	121	644	615	125	57	72
19....	26	....	....	....	....	....	180	581	564	120	53	68
20....	27	....	....	....	....	....	248	449	548	120	45	61
21....	29	....	....	....	....	....	292	480	609	119	42	55
22....	28	....	....	....	....	....	380	490	663	110	41	57
23....	29	....	....	....	....	....	532	444	586	102	41	53
24....	29	....	....	....	....	....	554	543	496	92	39	52
25....	28	....	....	....	....	....	570	615	475	92	42	53
26....	27	....	....	....	....	....	548	713	480	86	39	48
27....	25	....	....	....	....	....	459	842	480	85	45	47
28....	24	....	....	....	....	....	496	1070	404	94	42	45
29....	22	....	....	....	....	....	603	1130	438	90	41	42
30....	20	Nov. 1	....	....	....	....	694	966	464	80	40	40
31....	22	to 11	....	....	....	....	....	890	....	110	38	....
Total	308	186	....	....	....	....	6669	15593	19630	5142	2003	2288
Mean.	30.8	16.9	....	....	....	....	222	503	654	166	64.6	76.3
Max..	38	20	....	....	....	....	694	1130	975	409	110	175
Min..	20	14	....	....	....	....	20	148	404	80	38	40
Acre-ft.	1900	369	....	....	....	....	13230	30930	38940	10200	3970	4540

Total run-off for period=104,079 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Alamosa River Below Terrace Reservoir, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	31	....	....	....	....	30	303	289	280	100	120
2....	33	31	....	....	....	....	30	303	327	286	111	111
3....	34	31	*30	....	....	....	30	303	388	280	115	107
4....	34	31	....	....	....	....	30	303	392	270	144	107
5....	34	30	....	....	....	....	30	414	368	270	146	104
6....	34	30	....	....	....	....	30	396	338	270	151	104
7....	32	30	....	....	....	....	30	400	342	267	107	102
8....	30	30	....	....	....	....	75	427	400	236	109	102
9....	30	30	....	....	....	....	75	431	414	221	109	96
10....	30	30	....	....	....	....	40	440	414	153	113	88
11....	30	30	....	....	....	....	40	436	422	104	151	88
12....	30	30	....	....	....	....	40	380	496	165	153	88
13....	30	30	....	....	....	....	64	380	496	196	153	88
14....	30	30	....	....	....	....	88	380	496	270	153	86
15....	30	30	....	....	....	....	118	449	431	270	153	82
16....	30	30	....	....	....	....	227	546	414	245	151	82
17....	30	30	....	....	....	....	303	546	445	218	165	82
18....	30	30	....	....	....	....	303	633	486	202	168	78
19....	30	30	....	....	....	....	306	799	496	193	168	76
20....	30	30	....	....	....	....	276	850	491	188	168	75
21....	30	30	....	....	....	....	233	696	491	186	160	73
22....	30	30	....	....	....	....	233	506	468	186	153	71
23....	30	30	....	....	....	....	239	908	463	170	134	51
24....	30	30	....	....	....	....	239	1030	463	156	129	40
25....	30	30	....	....	....	....	239	869	458	153	124	40
26....	30	30	....	....	....	....	239	588	400	156	124	38
27....	30	30	....	....	....	....	239	458	313	124	141	37
28....	30	30	....	....	....	....	280	364	306	100	146	33
29....	30	30	....	....	....	....	303	349	276	100	134	26
30....	30	30	....	....	....	....	303	310	280	100	132	22
31....	30	....	....	....	....	....	....	286	....	100	127	....
Total	953	904	930	930	840	930	4712	15483	12263	6115	4292	2297
Mean.	30.7	30.1	30	30	30	30	157	499	409	197	138	76.6
Max..	34	31	....	....	....	....	396	1030	496	286	168	120
Min..	30	30	....	....	....	....	30	286	276	100	100	22
Acre-ft.	1890	1790	1840	1840	1670	1840	9350	30710	24320	12130	8510	4560

Total run-off for water year 1936-37=100,450 acre-feet.

*Discharge measurement.

Discharge of Alamosa River Below Terrace Reservoir, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	22	20	17	3.0	3.0	3.0	17	219	734	430	205	108
2....	22	20	17	3.0	3.0	3.0	18	258	836	406	202	108
3....	22	20	17	3.0	3.0	3.0	19	303	836	354	196	119
4....	23	20	17	3.0	3.0	3.0	23	271	926	316	180	117
5....	25	20	17	3.0	3.0	3.0	30	216	989	303	177	108
6....	26	20	16	3.0	3.0	3.0	30	188	915	296	121	94
7....	30	20	16	3.0	3.0	3.0	30	191	826	277	74	83
8....	30	20	16	3.0	3.0	3.0	31	193	772	277	219	85
9....	25	20	16	3.0	3.0	3.0	32	191	707	280	213	90
10....	21	20	16	3.0	3.0	3.0	33	185	629	274	210	90
11....	21	19	15	3.0	3.0	3.0	39	185	634	271	210	90
12....	22	19	15	3.0	3.0	3.0	44	182	639	271	199	92
13....	21	19	15	3.0	3.0	3.0	52	180	639	265	119	81
14....	21	19	15	3.0	3.0	3.0	78	182	644	268	66	79
15....	21	19	15	3.0	3.0	10	78	243	644	268	185	78
16....	21	19	14	3.0	3.0	14	78	330	639	219	172	78
17....	25	19	14	3.0	3.0	14	78	399	599	180	154	78
18....	32	19	3.0	3.0	3.0	15	78	467	560	290	164	78
19....	34	19	3.0	3.0	3.0	15	98	536	527	252	172	78
20....	37	19	3.0	3.0	3.0	16	124	389	489	268	102	71
21....	39	18	3.0	3.0	3.0	16	126	376	494	205	50	68
22....	38	18	3.0	3.0	3.0	16	130	376	639	180	145	68
23....	24	18	3.0	3.0	3.0	17	133	403	696	117	142	60
24....	25	18	3.0	3.0	3.0	17	149	430	536	72	135	54
25....	21	18	3.0	3.0	3.0	17	164	512	472	202	133	54
26....	21	18	3.0	3.0	3.0	18	167	527	410	202	133	54
27....	22	18	3.0	3.0	3.0	17	169	556	434	199	133	52
28....	22	18	3.0	3.0	3.0	17	191	570	450	185	133	52
29....	22	18	3.0	3.0	....	17	213	826	450	191	128	48
30....	22	18	3.0	3.0	....	16	216	898	442	137	121	43
31....	22	....	3.0	3.0	....	15	....	691	....	88	114	....
Total	779	570	310	93	84	309	2668	11473	19207	7543	4707	2358
Mean.	25.1	19.0	10.0	3.0	3.0	9.97	88.9	370	640	243	152	78.6
Max..	39	20	17	3.0	3.0	18	216	898	989	430	219	119
Min..	21	18	3.0	3.0	3.0	3.0	17	180	410	72	50	43
Acre-ft.	1550	1120	615	184	167	613	5290	22760	38100	14960	9340	4680

Total run-off for water year 1937-38=99,390 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of La Jara Creek (Gallegos Ranch) Near Capulin, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	13	8	.....	.....	.....	.....	12	131	18	13	18	17
2.....	13	8	.....	.....	.....	.....	12	128	24	15	18	14
3.....	11	11	.....	.....	.....	.....	12	131	23	14	18	15
4.....	9.4	24	.....	.....	.....	.....	12	128	24	12	18	14
5.....	8.4	15	.....	.....	.....	.....	12	128	23	11	18	14
6.....	11	15	.....	.....	.....	.....	30	110	22	11	18	11
7.....	12	10	.....	.....	.....	.....	30	116	27	9.8	18	14
8.....	14	7	.....	.....	.....	.....	30	124	20	11	19	12
9.....	12	8	.....	.....	.....	.....	30	133	22	12	18	11
10.....	10	10	.....	.....	.....	.....	30	122	15	12	18	9.4
11.....	9.1	6	.....	.....	.....	.....	120	112	11	13	19	9.0
12.....	8.8	6	.....	.....	.....	.....	200	101	11	13	22	8.7
13.....	8.4	6	.....	.....	.....	.....	291	93	11	12	32	8.4
14.....	8.8	5	.....	.....	.....	.....	369	93	11	12	38	8.7
15.....	8.8	4.5	.....	.....	.....	.....	432	94	13	11	40	8.4
16.....	8.8	4.5	.....	.....	.....	.....	448	84	13	11	41	8.4
17.....	8.8	4.5	.....	.....	.....	.....	302	76	13	9.8	43	8.7
18.....	8.4	4.5	.....	.....	.....	.....	219	72	13	9.8	44	8.7
19.....	8.4	6	.....	.....	.....	.....	210	63	13	9.8	45	8.4
20.....	11	6	.....	.....	.....	.....	185	52	13	10	45	8.7
21.....	12	5	.....	.....	.....	.....	254	44	13	9.8	42	12
22.....	10	5	.....	.....	.....	.....	206	40	13	29	41	14
23.....	11	4.0	.....	.....	.....	.....	114	36	13	36	41	14
24.....	10	5	.....	.....	.....	.....	104	38	13	38	39	13
25.....	11	4.5	.....	.....	.....	.....	144	40	15	57	39	9.4
26.....	12	4.0	.....	.....	.....	.....	168	36	15	60	40	8.4
27.....	11	4.0	.....	.....	.....	.....	142	31	15	59	42	8.4
28.....	10	3.5	.....	.....	.....	.....	140	30	15	48	39	8.4
29.....	9.4	4.0	.....	.....	.....	.....	147	37	15	46	26	10
30.....	12	4.5	.....	.....	.....	.....	137	48	15	17	25	15
31.....	16	.....	.....	.....	.....	.....	.....	29	.....	17	24	.....
Total	327.5	212.5	.....	.....	.....	.....	4542	2500	482	649.0	948	330.1
Mean..	10.6	7.08	.....	.....	.....	.....	151	80.6	16.1	20.9	30.6	11.0
Max...	16	24	.....	.....	.....	.....	448	133	27	60	45	17
Min...	8.4	3.5	.....	.....	.....	.....	12	29	11	9.8	18	8.4
Acre-ft.	650	421	.....	.....	.....	.....	9010	4960	956	1290	1880	655

Total run-off for period=19,822 acre-feet.

*Discharge measurement.

**Discharge of La Jara Creek (Gallegos Ranch) Near Capulin, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	13	10	.....	.....	.....	.....	11	133	19	10	28	10
2.....	11	9.8	.....	.....	.....	.....	12	85	18	10	29	28
3.....	11	9.8	.....	.....	.....	.....	11	95	18	10	30	27
4.....	9.8	9.8	.....	.....	.....	.....	10	88	17	9.8	30	41
5.....	9.8	9.0	.....	.....	.....	.....	11	63	16	9.8	29	32
6.....	9.4	9.4	.....	.....	.....	.....	11	58	15	9.5	30	30
7.....	9.0	12	.....	.....	.....	.....	10	57	15	9.5	30	30
8.....	9.4	.....	.....	.....	.....	.....	10	55	14	9.2	31	22
9.....	9.0	.....	.....	.....	.....	.....	10	63	14	8.9	36	20
10.....	8.4	.....	.....	.....	.....	.....	14	54	13	9.5	43	20
11.....	7.5	.....	.....	.....	.....	.....	21	51	13	10	49	21
12.....	8.4	.....	.....	.....	.....	.....	33	50	12	9.8	51	15
13.....	10	.....	.....	.....	.....	.....	41	50	13	9.5	50	11
14.....	9.8	.....	.....	.....	.....	.....	58	59	15	12	48	10
15.....	9.4	.....	.....	.....	.....	.....	36	77	12	14	47	10
16.....	11	.....	.....	.....	.....	.....	38	88	11	13	49	10
17.....	11	.....	.....	.....	.....	.....	52	73	10	14	49	10
18.....	10	.....	.....	.....	.....	Mar. 20	96	65	9.8	11	48	10
19.....	10	.....	.....	.....	.....	to 31	224	64	9.2	14	48	10
20.....	10	.....	.....	.....	.....	.....	11	319	53	9.2	11	48
21.....	9.0	.....	.....	.....	.....	.....	10	245	49	9.5	45	9.5
22.....	9.0	.....	.....	.....	.....	.....	11	190	45	9.2	8.0	41
23.....	9.0	.....	.....	.....	.....	.....	12	235	41	9.8	8.3	41
24.....	8.4	.....	.....	.....	.....	.....	12	205	37	10	8.0	41
25.....	9.0	.....	.....	.....	.....	.....	14	194	34	10	9.2	41
26.....	9.0	.....	.....	.....	.....	.....	14	178	31	10	9.5	33
27.....	8.7	.....	.....	.....	.....	.....	13	129	28	12	23	32
28.....	8.7	.....	.....	.....	.....	.....	11	133	25	11	27	28
29.....	8.7	.....	.....	.....	.....	.....	11	133	22	11	27	25
30.....	9.0	Nov. 1	.....	.....	.....	.....	11	137	22	10	28	13
31.....	9.8	to 7	.....	.....	.....	.....	11	.....	21	.....	29	10
Total	255.2	69.8	.....	.....	.....	.....	141	2807	1736	375.7	401.0	1153
Mean..	9.52	9.97	.....	.....	.....	.....	11.8	93.6	56.0	12.5	12.9	37.2
Max...	13	12	.....	.....	.....	.....	14	319	133	19	29	51
Min...	7.5	9.0	.....	.....	.....	.....	10	10	21	9.2	8.0	10
Acre-ft.	586	138	.....	.....	.....	.....	280	5570	3440	745	795	2290

Total run-off for period=14,773 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Trinchera Creek Above Turner Ranch Near Fort Garland, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	18	18	....	....	....	....	10	59	162	63	22	15
2....	18	16	....	....	....	....	10	66	166	59	22	14
3....	18	10	....	....	....	....	10	72	166	56	21	15
4....	18	14	....	....	....	....	11	74	162	52	19	15
5....	18	19	....	....	....	....	11	80	147	51	19	15
6....	16	18	....	....	....	....	10	85	124	49	18	15
7....	16	18	....	....	....	....	10	87	109	46	18	16
8....	18	17	....	....	....	....	11	121	100	46	17	15
9....	20	15	....	....	....	....	10	127	87	43	16	14
10....	20	16	....	....	....	....	12	134	83	45	15	14
11....	19	15	....	....	....	....	16	144	81	45	16	13
12....	18	14	....	....	....	....	22	173	85	42	15	13
13....	18	14	....	....	....	....	31	208	81	39	15	12
14....	18	14	....	....	....	....	41	192	83	38	15	12
15....	18	14	....	....	....	....	53	204	81	35	15	12
16....	18	13	....	....	....	....	63	216	79	33	15	12
17....	18	13	....	....	....	....	57	204	76	33	17	13
18....	18	12	....	....	....	....	45	196	76	31	16	12
19....	18	12	....	....	....	....	46	166	74	28	16	12
20....	21	12	....	....	....	....	43	137	74	28	15	12
21....	20	12	....	....	....	....	51	162	74	26	15	12
22....	20	13	....	....	....	....	65	158	76	25	14	12
23....	20	12	....	....	....	....	65	162	76	24	14	12
24....	20	14	....	....	....	....	52	166	74	23	14	11
25....	20	14	....	....	....	....	49	166	74	23	15	11
26....	20	13	....	....	....	....	53	154	74	24	15	11
27....	19	13	....	....	....	....	66	147	72	23	15	11
28....	18	14	....	....	....	....	66	144	68	25	14	11
29....	18	12	....	....	....	....	60	147	66	30	13	12
30....	19	13	....	....	....	....	58	151	66	25	14	17
31....	19	....	....	....	....	....	....	154	....	23	18	....
Total	577	424	....	....	....	....	1108	4456	2816	1133	503	391
Mean.	18.6	14.1	....	....	....	....	36.9	144	93.9	36.5	16.2	13.0
Max..	21	19	....	....	....	....	66	216	166	63	22	17
Min..	16	10	....	....	....	....	10	59	66	23	13	11
Acre-ft.	1140	841	....	....	....	....	2200	8840	5590	2250	998	776

Total run-off for period=22,635 acre-feet.

**Discharge of Trinchera Creek Above Turner Ranch Near Fort Garland, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	10	....	....	....	....	13	79	192	61	21	17
2....	12	10	....	....	....	....	16	66	184	59	20	18
3....	12	....	....	....	....	....	14	58	173	57	24	19
4....	12	....	....	....	....	....	9.0	51	173	55	36	18
5....	12	....	....	....	....	....	10	48	158	51	25	19
6....	11	....	....	....	....	....	12	45	154	49	24	19
7....	11	....	....	....	....	....	23	41	147	49	21	19
8....	11	....	....	....	....	....	23	39	140	46	20	19
9....	11	....	....	....	....	....	22	38	137	44	19	17
10....	11	....	....	....	....	....	15	36	130	44	24	17
11....	11	....	....	....	....	....	15	41	130	42	26	21
12....	12	....	....	....	....	....	15	43	134	44	27	25
13....	13	....	....	....	....	....	15	54	134	41	26	21
14....	12	....	....	....	....	....	14	83	137	51	25	20
15....	12	....	....	....	....	....	23	124	134	41	22	19
16....	14	....	....	....	....	....	14	140	124	38	20	20
17....	13	....	....	....	....	....	15	151	117	36	21	19
18....	13	....	....	....	....	....	22	140	111	36	20	18
19....	12	....	....	....	....	....	30	127	109	34	18	17
20....	12	....	....	....	....	....	31	127	103	35	18	16
21....	12	....	....	....	....	....	34	134	100	32	18	16
22....	12	....	....	....	....	....	41	130	98	32	16	16
23....	12	....	....	....	....	....	51	117	90	31	17	16
24....	11	....	....	....	....	....	58	111	85	30	17	16
25....	11	....	....	....	....	....	59	117	82	28	17	16
26....	11	....	....	....	....	....	56	121	80	27	17	15
27....	11	....	....	....	....	....	51	130	77	27	17	15
28....	11	....	....	....	....	....	45	147	74	25	18	15
29....	11	....	....	....	....	....	51	177	70	24	17	15
30....	10	....	....	....	....	....	66	196	63	24	17	15
31....	10	....	....	....	....	....	....	200	....	21	16	....
Total	363	....	....	....	....	....	863.0	3111	3640	1214	644	533
Mean.	11.7	....	....	....	....	....	28.8	100	121	39.2	20.8	17.8
Max..	14	....	....	....	....	....	66	200	192	61	36	25
Min..	10	....	....	....	....	....	9.0	36	63	21	16	15
Acre-ft.	720	....	....	....	....	....	1710	6170	7220	2410	1280	1060

Total run-off during period=20,570 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Trinchera Creek Above Mountain Home Reservoir Near Fort Garland, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	16	16	....	....	....	....	8.5	52	127	60	18	14
2....	16	16	....	....	....	....	9.2	56	140	54	19	13
3....	17	11	....	....	....	....	9.2	66	159	48	20	14
4....	16	11	....	....	....	....	10	68	172	46	19	15
5....	15	16	....	....	....	....	9.6	74	189	45	18	14
6....	15	17	....	....	....	....	8.9	78	171	43	18	13
7....	13	18	....	....	....	....	9.2	77	171	43	18	16
8....	14	16	....	....	....	....	9.2	89	159	38	17	14
9....	15	16	....	....	....	....	9.2	107	151	36	17	13
10....	16	15	....	....	....	....	9.2	114	144	34	16	12
11....	15	16	....	....	....	....	10	127	136	34	16	12
12....	15	16	....	....	....	....	14	129	125	33	15	12
13....	15	16	....	....	....	....	20	140	117	32	14	12
14....	16	16	....	....	....	....	27	145	108	28	14	11
15....	16	14	....	....	....	....	36	151	104	24	14	11
16....	16	13	....	....	....	....	49	151	102	20	14	10
17....	16	13	....	....	....	....	49	150	100	18	13	11
18....	16	13	....	....	....	....	35	161	98	16	14	11
19....	16	13	....	....	....	....	35	162	94	16	13	10
20....	19	13	....	....	....	....	31	157	92	14	13	10
21....	20	13	....	....	....	....	36	154	90	13	13	9.7
22....	18	12	....	....	....	....	52	145	88	13	13	9.7
23....	17	10	....	....	....	....	54	144	86	12	12	10
24....	16	9.3	....	....	....	....	45	140	84	12	12	9.7
25....	15	9.7	....	....	....	....	45	133	82	12	12	9.4
26....	15	10	....	....	....	....	42	120	80	18	15	9.4
27....	15	9.7	....	....	....	....	59	110	78	13	16	9.4
28....	15	10	....	....	....	....	61	103	78	13	15	9.4
29....	16	9.3	....	....	....	....	52	112	78	16	13	9.4
30....	16	9.7	....	....	....	....	49	123	68	15	14	14
31....	16	....	....	....	....	....	119	....	....	16	16	....
Total	492	396.7	....	....	....	....	893.2	3657	3471	835	471	348.1
Mean.	15.9	13.2	....	....	....	....	29.8	118	116	26.9	15.2	11.6
Max..	20	18	....	....	....	....	61	162	189	60	20	16
Min..	13	9.3	....	....	....	....	8.5	52	68	12	12	9.4
Acre-ft.	976	787	....	....	....	....	1770	7250	6880	1660	934	690

Total run-off for period=20,947 acre-feet.

**Discharge of Trinchera Creek Above Mountain Home Reservoir Near Fort Garland, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	9.7	....	....	....	....	12	73	143	43	14	12
2....	12	9.4	....	....	....	....	13	65	140	40	14	14
3....	11	9.4	....	....	....	....	13	62	133	38	16	14
4....	10	9.1	....	....	....	....	12	54	132	37	26	14
5....	10	9.1	....	....	....	....	12	49	129	34	28	14
6....	10	8.8	....	....	....	....	12	45	132	31	26	14
7....	10	8.8	....	....	....	....	22	40	132	28	23	16
8....	10	9.4	....	....	....	....	22	38	125	28	23	14
9....	10	8.5	....	....	....	....	20	37	116	28	21	14
10....	10	....	....	....	....	....	20	34	107	25	21	12
11....	10	....	....	....	....	....	20	37	100	25	25	16
12....	10	....	....	....	....	....	20	41	101	23	25	20
13....	11	....	....	....	....	....	18	49	114	23	26	18
14....	11	....	....	....	....	....	16	67	105	22	23	16
15....	11	....	....	....	....	....	17	96	94	21	22	15
16....	12	....	....	....	....	....	16	120	90	20	20	16
17....	12	....	....	....	....	....	16	124	86	20	20	16
18....	12	....	....	....	....	....	20	118	85	20	19	14
19....	11	....	....	....	....	....	29	104	81	18	18	14
20....	10	....	....	....	....	....	32	100	74	18	16	14
21....	10	....	....	....	....	....	34	107	76	17	15	13
22....	10	....	....	....	....	....	38	120	74	16	14	13
23....	10	....	....	....	....	....	46	98	72	16	12	13
24....	10	....	....	....	....	....	50	83	67	16	12	12
25....	10	....	....	....	....	....	55	85	63	14	12	12
26....	10	....	....	....	....	....	60	95	66	14	12	12
27....	10	....	....	....	....	....	51	110	63	15	12	12
28....	10	....	....	....	....	....	47	123	55	16	12	11
29....	9.7	....	....	....	....	....	50	152	53	15	12	11
30....	9.7	Nov. 1	....	....	....	....	61	158	49	15	12	10
31....	9.7	to 9	....	....	....	....	141	....	....	15	12	....
Total	326.1	82.2	....	....	....	....	857	2625	2857	711	563	416
Mean.	10.5	9.13	....	....	....	....	28.6	84.7	95.2	22.9	18.2	13.9
Max..	14	9.7	....	....	....	....	61	158	143	43	28	20
Min..	9.7	8.5	....	....	....	....	12	34	49	14	12	10
Acre-ft.	647	163	....	....	....	....	1700	5210	5670	1410	1120	825

Total run-off during period=16,745 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Trinchera Creek Below Smith Reservoir Near Blanca, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.4	42	.....	.....	.....	.....	44	247	175	66	9.1	.5
2.....	2.2	44	.....	.....	.....	.....	65	240	160	88	8.8	.4
3.....	5.8	42	.....	.....	.....	.....	87	236	164	93	8.8	.4
4.....	8.9	38	.....	.....	.....	.....	77	238	185	111	9.1	.5
5.....	11	39	.....	.....	.....	.....	77	244	177	84	8.8	.4
6.....	13	44	.....	.....	.....	.....	77	266	170	57	8.6	.3
7.....	7.0	47	.....	.....	.....	.....	77	299	159	40	8.6	.4
8.....	4.9	45	.....	.....	.....	.....	66	311	145	27	8.4	.5
9.....	3.7	42	.....	.....	.....	.....	63	356	140	17	8.1	.3
10.....	2.6	41	.....	.....	.....	.....	62	387	135	12	8.1	.3
11.....	2.2	39	.....	.....	.....	.....	69	405	124	9.6	8.6	.5
12.....	1.6	38	.....	.....	.....	.....	101	416	113	7.2	8.6	.4
13.....	1.8	37	.....	.....	.....	.....	152	400	102	6.2	8.6	.5
14.....	3.3	37	.....	.....	.....	.....	211	390	95	5.6	2.1	.6
15.....	8.6	38	.....	.....	.....	.....	286	389	86	5.2	1.1	.6
16.....	13	38	.....	.....	.....	.....	386	397	77	4.7	0.9	.5
17.....	14	39	.....	.....	.....	.....	575	389	66	4.1	.8	.5
18.....	18	39	.....	.....	.....	.....	429	363	55	3.9	.9	.6
19.....	20	38	.....	.....	.....	.....	332	334	40	3.6	.7	.5
20.....	25	36	.....	.....	.....	.....	306	309	27	3.6	.5	.3
21.....	31	39	.....	.....	.....	.....	292	280	16	3.8	.5	.4
22.....	36	36	.....	.....	.....	.....	300	245	9.8	3.6	.5	.6
23.....	39	35	.....	.....	.....	.....	342	232	4.5	3.6	.4	.6
24.....	39	30	.....	.....	.....	.....	342	221	3.4	3.6	.4	.6
25.....	40	27	.....	.....	.....	.....	299	206	3.4	3.4	.6	.6
26.....	36	26	.....	.....	.....	.....	270	188	3.6	1.5	.5	.6
27.....	38	26	.....	.....	.....	.....	248	163	6.0	1.8	.4	.6
28.....	39	25	.....	.....	.....	.....	256	138	22	3.9	.5	.6
29.....	39	24	.....	.....	.....	.....	271	140	24	6.2	.4	.6
30.....	38	23	.....	.....	.....	.....	259	184	24	6.7	.3	.6
31.....	39	.....	.....	.....	.....	39	.....	199	.....	7.2	.3	.....
Total	582.0	1094	.....	.....	.....	.....	6421	8812	2511.7	694.0	124.0	14.8
Mean.	18.8	36.5	.....	.....	.....	.....	211	284	83.7	22.4	4.0	0.49
Max..	40	47	.....	.....	.....	.....	575	416	185	111	9.1	0.6
Min..	1.4	23	.....	.....	.....	.....	44	138	3.4	1.5	0.3	0.3
Acre-ft.	1150	2170	.....	.....	.....	.....	12740	17480	4980	1380	246	29

Total run-off for period=40,175 acre-feet.

**Discharge of Trinchera Creek Below Smith Reservoir Near Blanca, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.6	0.8	0.1	0.1	0.1	1	24	252	100	6.4	1.0	0.9
2.....	0.6	0.9	0.1	0.1	0.1	5	22	279	81	6.7	1.8	0.9
3.....	0.6	0.1	0.1	0.1	0.1	10	21	279	75	6.4	4.1	1.1
4.....	0.6	0.1	0.1	0.1	0.1	15	20	268	73	6.2	3.9	1.1
5.....	0.6	0.1	0.1	0.1	0.1	19	19	240	68	5.8	3.9	1.1
6.....	0.6	0.1	0.1	0.1	0.1	20	44	229	67	4.5	3.9	1.1
7.....	0.6	0.1	0.1	0.1	0.1	20	5.4	205	61	4.5	3.6	1.0
8.....	0.6	0.1	0.1	0.1	0.1	22	9.3	191	54	2.7	3.1	0.9
9.....	0.7	0.1	0.1	0.1	0.1	23	21	180	49	2.1	2.3	0.9
10.....	0.8	0.1	0.1	0.1	0.1	22	22	172	33	1.9	2.4	1.0
11.....	0.9	0.1	0.1	0.1	0.1	22	24	174	21	1.4	2.6	1.0
12.....	1.0	0.1	0.1	0.1	0.1	21	26	185	20	4.3	2.4	1.0
13.....	1.4	0.1	0.1	0.1	0.1	23	33	197	31	7.2	2.9	1.0
14.....	1.0	0.1	0.1	0.1	0.1	26	46	217	46	7.2	3.1	0.8
15.....	0.8	0.1	0.1	0.1	0.1	27	57	246	43	6.7	2.1	0.7
16.....	1.1	0.1	0.1	0.1	0.1	25	59	287	28	6.4	1.8	0.6
17.....	1.0	0.1	0.1	0.1	0.1	23	67	318	17	4.3	1.9	0.6
18.....	0.8	0.1	0.1	0.1	0.1	26	76	324	14	1.9	1.4	0.5
19.....	0.8	0.1	0.1	0.1	0.1	25	92	307	13	1.9	1.2	0.5
20.....	0.9	0.1	0.1	0.1	0.1	22	108	280	12	2.0	1.1	0.5
21.....	0.8	0.1	0.1	0.1	0.1	20	138	260	12	1.8	1.1	0.7
22.....	0.8	0.1	0.1	0.1	0.1	24	154	227	12	1.5	1.1	0.6
23.....	1.0	0.1	0.1	0.1	0.1	23	172	211	13	1.2	1.1	0.6
24.....	0.9	0.1	0.1	0.1	0.1	20	186	188	16	1.1	1.2	0.6
25.....	0.7	0.1	0.1	0.1	0.1	29	183	171	17	0.9	1.1	0.7
26.....	0.7	0.1	0.1	0.1	0.1	49	190	160	15	0.9	1.0	0.7
27.....	0.9	0.1	0.1	0.1	0.1	16	224	151	14	0.9	1.0	0.6
28.....	0.8	0.1	0.1	0.1	0.1	18	218	143	14	1.0	1.0	0.6
29.....	0.8	0.1	0.1	0.1	.....	20	204	136	6.7	1.4	0.9	0.6
30.....	1.0	0.1	0.1	0.1	.....	23	215	140	6.7	1.4	0.9	0.6
31.....	0.9	.....	0.1	0.1	.....	22	.....	116	.....	1.1	1.0	.....
Total	25.3	4.50	3.10	3.10	2.80	661	2679.7	6733	1032.4	103.7	61.9	23.5
Mean.	0.82	0.15	0.10	0.10	0.10	21.3	89.3	217	34.4	3.35	2.00	0.78
Max..	1.4	0.9	.....	.....	.....	49	224	324	100	7.2	4.1	1.1
Min..	0.6	0.1	.....	.....	.....	1	5.4	116	6.7	0.9	0.9	0.5
Acre-ft.	50	8.90	6.10	6.1	5.6	1310	5320	13350	2050	206	123	47

Total run-off for water year 1937-38=22,480 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Sangre de Cristo Creek Near Fort Garland, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	31	....	....	....	....	30	228	110	46	12	6.8
2....	16	33	....	....	....	....	30	232	103	38	11	5.0
3....	17	41	....	....	....	....	30	248	158	35	12	4.3
4....	18	32	....	....	....	....	30	246	133	28	10	6.0
5....	16	37	....	....	....	....	30	248	126	28	9.4	11
6....	17	37	....	....	....	....	35	300	120	27	9.1	7.0
7....	16	34	....	....	....	....	35	330	109	25	8.4	8.8
8....	17	31	....	....	....	....	35	333	98	24	8.0	8.0
9....	17	29	....	....	....	....	38	408	92	23	7.4	6.5
10....	18	29	....	....	....	....	71	414	87	22	6.8	5.2
11....	18	27	....	....	....	....	125	422	79	22	6.2	4.8
12....	18	27	....	....	....	....	211	370	70	26	5.5	4.5
13....	17	24	....	....	....	....	252	347	65	23	5.2	4.1
14....	16	25	....	....	....	....	288	322	62	21	5.2	4.1
15....	16	22	....	....	....	....	543	318	62	20	5.2	3.9
16....	15	22	....	....	....	....	539	304	57	18	5.2	3.5
17....	15	21	....	....	....	....	375	282	53	16	8.8	4.1
18....	15	21	....	....	....	....	133	250	50	15	8.8	4.1
19....	15	20	....	....	....	....	192	238	49	14	8.0	3.9
20....	19	17	....	....	....	....	187	216	45	14	6.5	3.5
21....	22	19	....	....	....	....	212	193	42	13	6.2	3.5
22....	24	18	....	....	....	....	294	168	41	13	6.0	3.5
23....	23	15	....	....	....	....	314	149	38	12	6.0	3.5
24....	21	14	....	....	....	....	216	143	38	13	5.8	3.1
25....	21	27	....	....	....	....	177	132	38	12	5.8	3.1
26....	22	23	....	....	....	....	204	131	45	13	7.0	3.3
27....	23	21	....	....	....	....	262	116	62	14	8.8	3.5
28....	23	21	....	....	....	....	290	107	46	14	7.0	3.9
29....	22	21	....	....	....	....	266	110	39	15	5.8	3.9
30....	24	22	....	....	....	....	254	196	67	22	4.5	6.0
31....	28	....	....	....	....	....	....	127	15	15	4.5	....
Total	584	761	....	....	....	....	5698	7678	2184	641	226.1	146.4
Mean.	18.8	25.4	....	....	....	....	190	248	72.8	20.7	7.29	4.88
Max..	28	41	....	....	....	....	543	422	158	46	12	11
Min..	15	14	....	....	....	....	30	107	38	12	4.5	3.1
Acre-ft.	1160	1510	....	....	....	....	11300	15230	4330	1270	448	290

Total run-off for period=35,538 acre-feet.

Discharge of Sangre de Cristo Creek Near Fort Garland, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	7.4	7.4	....	....	....	....	14	327	115	30	8.4	6.2
2....	6.8	7.7	....	....	....	....	11	268	110	27	7.0	9.8
3....	5.8	7.4	....	....	....	....	12	261	102	26	6.2	10
4....	5.0	7.4	....	....	....	....	13	227	98	24	13	14
5....	4.3	7.4	....	....	....	....	16	198	88	22	12	10
6....	4.8	6.8	....	....	....	....	18	179	85	20	10	9.1
7....	4.8	7.4	....	....	....	....	10	155	85	19	8.4	7.7
8....	5.2	9.1	....	....	....	....	13	149	82	18	6.8	6.2
9....	5.0	7.7	....	....	....	....	16	165	76	18	6.0	5.8
10....	5.2	....	....	....	....	....	18	162	71	17	5.5	5.2
11....	5.5	....	....	....	....	....	22	193	70	17	6.8	6.8
12....	6.2	....	....	....	....	....	32	222	67	16	15	15
13....	8.4	....	....	....	....	....	36	244	77	16	7.4	19
14....	8.0	....	....	....	....	....	48	275	88	23	6.2	11
15....	7.4	....	....	....	....	....	61	320	66	30	6.8	8.4
16....	9.4	....	....	....	....	....	49	354	57	26	5.2	11
17....	13	....	....	....	....	....	52	354	52	23	4.5	14
18....	11	....	....	....	....	....	68	334	49	23	4.5	10
19....	10	....	....	....	....	....	115	307	46	25	3.7	8.0
20....	9.1	....	....	....	....	....	136	269	44	21	2.9	7.0
21....	8.8	....	....	....	....	....	155	244	40	29	2.3	6.2
22....	8.8	....	....	....	....	....	167	225	40	20	1.6	5.8
23....	8.8	....	....	....	....	....	211	203	38	17	1.6	5.2
24....	8.8	....	....	....	....	....	215	179	40	16	1.2	5.2
25....	8.8	....	....	....	....	....	206	160	36	14	1.1	5.2
26....	8.0	....	....	....	....	....	237	145	104	13	0.9	5.0
27....	8.0	....	....	....	....	....	215	139	56	12	1.4	5.0
28....	8.0	....	....	....	....	....	194	136	42	14	1.6	4.5
29....	7.4	....	....	....	....	....	227	131	37	13	1.4	4.1
30....	7.4	Nov. 1	....	....	....	....	254	128	36	11	1.4	4.1
31....	7.7	to 9	....	....	....	....	....	125	....	9.4	4.8	....
Total	232.8	68.3	....	....	....	....	2841	6778	1997	609.4	165.6	244.5
Mean.	7.51	7.59	....	....	....	....	94.7	219	66.6	19.7	5.34	8.15
Max..	13	9.1	....	....	....	....	254	354	115	30	15	19
Min..	4.3	6.8	....	....	....	....	10	125	36	9.4	0.9	4.1
Acre-ft.	462	135	....	....	....	....	5640	13440	3960	1210	328	485

Total run-off during period=25,660 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Ute Creek Near Fort Garland, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	23	21	....	....	....	....	6	84	104	178	30	16
2....	22	19	*12	....	....	....	6	93	104	122	30	14
3....	24	14	....	....	....	....	6.4	106	132	103	33	18
4....	21	18	....	....	....	....	7.8	111	110	86	29	26
5....	19	20	....	....	....	....	5.0	124	98	76	27	21
6....	20	19	....	....	....	....	4.7	145	90	71	25	19
7....	21	18	....	....	....	....	5.0	160	82	68	22	21
8....	17	18	....	....	....	....	4.4	167	80	63	21	18
9....	17	16	....	....	....	....	4.1	177	83	60	21	16
10....	18	15	....	....	....	....	5.0	184	77	55	18	15
11....	17	15	....	....	....	....	9.2	185	83	59	18	13
12....	17	16	....	....	....	....	17	185	91	53	16	19
13....	17	15	....	....	....	....	21	203	90	48	14	21
14....	18	16	....	....	....	....	26	208	92	46	13	12
15....	17	16	....	....	....	....	44	218	88	43	13	9.9
16....	17	16	....	....	....	....	70	220	90	41	16	9.2
17....	18	16	....	....	....	....	57	210	94	37	20	11
18....	16	17	....	....	....	....	41	199	91	33	23	9.9
19....	15	16	....	....	....	....	43	199	84	31	17	9.9
20....	19	16	....	....	....	....	42	184	85	26	15	9.2
21....	20	16	....	....	....	....	57	168	86	28	13	9.2
22....	20	15	....	....	....	....	75	156	80	28	11	9.2
23....	19	14	....	....	....	....	78	161	82	27	8.5	9.2
24....	20	13	....	....	....	....	83	145	80	26	6.4	7.8
25....	17	16	....	....	....	....	71	134	92	29	6.4	7.1
26....	18	15	....	....	....	....	75	115	126	33	7.8	7.1
27....	19	15	....	....	....	....	96	107	105	33	13	7.1
28....	19	16	....	....	....	....	99	108	82	33	12	7.1
29....	20	15	....	....	....	....	87	134	75	33	11	7.1
30....	21	14	....	....	....	....	83	138	154	33	11	13
31....	23	....	....	....	....	....	....	113	....	29	21	....
Total	589	486	....	....	....	....	1228.6	4841	2810	1631	542.1	392.0
Mean.	19.0	16.2	....	....	....	....	41.0	156	93.7	52.6	17.5	13.1
Max.	24	21	....	....	....	....	99	220	154	178	33	26
Min.	15	13	....	....	....	....	4.1	84	75	26	6.4	7.1
Acre-ft.	1170	964	....	....	....	....	2440	9600	5570	3240	1080	778

Total run-off for period=24,842 acre-feet.

*Discharge measurement.

Discharge of Ute Creek Near Fort Garland, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	13	7.1	....	....	....	....	11	126	133	88	13	17
2....	9.9	7.1	....	....	....	....	15	105	137	74	11	27
3....	9.2	7.1	....	....	....	....	11	99	144	62	12	35
4....	7.8	7.1	....	....	....	....	11	82	150	58	15	34
5....	6.4	6.4	....	....	....	....	11	73	154	54	12	31
6....	6.4	5.7	....	....	....	....	9.8	65	149	49	11	31
7....	6.4	6.4	....	....	....	....	7.4	58	140	44	11	35
8....	5.7	6.4	....	....	....	....	7.4	54	128	42	11	45
9....	5.7	5.7	....	....	....	....	6.6	54	117	41	12	37
10....	6.4	....	....	....	....	....	4.7	52	114	40	15	29
11....	5.7	....	....	....	....	....	9.8	56	104	39	22	48
12....	7.1	....	....	....	....	....	14	59	102	40	29	96
13....	7.8	....	....	....	....	....	14	62	139	41	30	82
14....	7.1	....	....	....	....	....	12	77	121	43	31	55
15....	7.8	....	....	....	....	....	19	106	103	46	25	44
16....	11	....	....	....	....	....	17	129	105	40	22	38
17....	9.9	....	....	....	....	....	20	132	111	38	21	34
18....	9.2	....	....	....	....	....	29	123	106	39	19	29
19....	7.1	....	....	....	....	....	37	112	92	42	15	26
20....	6.4	....	....	....	....	....	43	106	91	40	14	23
21....	6.4	....	....	....	....	....	55	101	94	40	12	22
22....	5.7	....	....	....	....	....	66	98	115	34	11	20
23....	6.4	....	....	....	....	....	82	89	123	31	11	19
24....	7.1	....	....	....	....	....	91	84	105	28	9.0	19
25....	7.8	....	....	....	....	....	100	88	96	25	6.6	18
26....	7.8	....	....	....	....	....	113	100	91	23	5.0	16
27....	8.5	....	....	....	....	....	107	118	88	23	7.4	16
28....	7.8	....	....	....	....	....	92	133	84	23	7.4	13
29....	7.8	....	....	....	....	....	95	146	100	19	5.8	13
30....	7.8	....	....	....	....	....	115	149	110	17	9.0	13
31....	7.1	to 9	....	....	....	....	....	135	....	14	9.0	....
Total	236.2	59.0	....	....	....	....	1225.7	2971	3446	1237	444.2	965
Mean.	7.62	6.56	....	....	....	....	40.9	95.8	115	39.9	14.3	32.2
Max.	13	7.1	....	....	....	....	115	149	154	88	31	96
Min.	5.7	5.7	....	....	....	....	4.7	52	84	14	5	13
Acre-ft.	468	117	....	....	....	....	2430	5890	6840	2450	881	1910

Total run-off for period=20,986 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Conejos River at Platoro, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....							16	207	655	500	56	22
2....							16	322	695	483	49	19
3....							17	392	668	414	44	19
4....							18	447	605	356	43	19
5....							19	463	495	306	44	16
6....							17	387	442	268	52	16
7....							17	421	500	233	43	36
8....							18	511	570	215	38	22
9....							20	522	576	201	32	20
10....							27	563	588	198	30	19
11....							29	642	655	218	27	16
12....							31	750	668	187	24	15
13....							43	830	637	177	23	15
14....							46	914	618	161	23	14
15....							121	938	612	148	25	13
16....							181	970	649	133	32	13
17....							181	1030	693	121	32	13
18....							175	994	699	113	25	12
19....							250	954	686	102	23	12
20....							257	946	680	87	19	11
21....							257	907	674	82	18	11
22....							297	868	668	72	16	11
23....							272	852	661	66	15	12
24....							235	623	600	66	15	11
25....							257	473	600	68	16	9.8
26....							250	373	570	70	19	9
27....							297	368	478	72	23	8.6
28....							257	373	429	84	24	8.6
29....							221	473	404	87	20	14
30....							210	506	429	74	32	40
31....								580		64	33	....
Total							4052	19599	17904	5426	915	477
Mean..							135	632	597	175	29.5	15.9
Max..							297	1030	699	500	56	40
Min..							16	207	404	64	15	8.6
Acre-ft.							8040	38870	35510	10760	1810	946

Total run-off for period=95,936 acre-feet.

Discharge of Conejos River at Platoro, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	16	11	....	....	....	....	359	887	478	102	40
2....	26	15	9.0	....	....	....	....	244	868	438	76	62
3....	24	15	9.4	....	....	....	....	179	900	395	71	59
4....	24	14	11	....	....	....	....	143	932	350	71	54
5....	21	13	10	....	....	....	....	118	919	306	58	51
6....	19	11	8.0	....	....	....	....	97	887	260	54	45
7....	18	13	8.0	....	....	....	Apr. 9	73	855	232	54	40
8....	17	11	8.0	....	....	....	to 30	80	756	214	51	40
9....	16	12	8.0	....	....	....	15	73	697	203	60	34
10....	15	15	7.4	....	....	....	19	71	714	170	54	40
11....	14	14	7.4	....	....	....	27	102	656	166	65	66
12....	15	12	7.0	....	....	....	28	134	848	157	54	90
13....	15	15	6.6	....	....	....	30	176	920	143	73	140
14....	15	13	....	....	....	....	34	306	780	157	72	120
15....	21	12	....	....	....	....	27	405	750	179	62	100
16....	22	11	....	....	....	....	27	463	750	163	54	90
17....	19	11	....	....	....	....	32	463	792	146	45	66
18....	19	12	....	....	....	....	49	438	750	131	44	62
19....	17	13	....	....	....	....	102	354	697	134	36	58
20....	17	11	....	....	....	....	160	306	697	118	31	58
21....	19	13	....	....	....	....	182	332	848	109	27	53
22....	19	16	....	....	....	....	240	323	874	99	27	49
23....	21	16	....	....	....	....	382	336	697	92	26	45
24....	21	15	....	....	....	....	410	443	634	82	26	42
25....	19	15	....	....	....	....	424	540	612	80	25	44
26....	19	14	....	....	....	....	395	617	617	80	25	37
27....	19	13	....	....	....	....	336	786	557	82	26	34
28....	19	15	....	....	....	....	386	999	488	80	26	32
29....	18	13	....	....	....	....	414	932	703	71	26	31
30....	16	11	Dec. 1	....	....	....	448	842	578	65	25	27
31....	17	....	to 13	....	....	....	....	893	....	140	24	....
Total	593	400	110.8	....	....	....	4167	11627	22663	5520	1470	1709
Mean..	19.1	13.3	8.52	....	....	....	189	375	755	178	47.4	57.0
Max..	32	16	11	....	....	....	448	999	932	478	102	140
Min..	11	11	6.6	....	....	....	15	71	488	65	24	27
Acre-ft.	1180	793	220	....	....	....	8270	23060	44950	10950	2920	3390

Total run-off for period=95,733 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Conejos River Near Mogote, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	198	161	87	58	50	55	102	803	1780	970	211	111
2....	191	132	100	56	50	60	124	1060	1870	1220	187	87
3....	194	96	87	50	50	60	127	1420	1830	950	172	89
4....	179	132	85	48	45	60	116	1550	1720	830	158	104
5....	164	172	80	52	45	65	102	1830	1490	740	158	93
6....	183	168	80	55	45	65	111	1730	1320	668	158	104
7....	172	158	70	54	45	75	104	1680	1240	587	151	161
8....	187	151	61	54	47	75	111	1890	1400	504	151	132
9....	194	135	64	54	47	75	148	2230	1460	452	132	102
10....	183	132	68	54	47	77	202	2110	1360	417	116	85
11....	172	129	66	54	47	75	317	2170	1530	504	106	76
12....	168	124	61	54	47	75	417	2300	1600	504	98	69
13....	151	132	58	54	47	85	560	2530	1510	445	93	66
14....	148	138	65	54	47	85	749	2720	1480	410	93	66
15....	138	135	70	54	47	70	970	2960	1380	374	96	62
16....	129	138	68	52	50	65	1220	2710	1480	339	114	60
17....	119	135	68	54	50	90	1060	2830	1550	312	124	63
18....	111	138	58	56	50	100	866	2990	1580	295	129	60
19....	109	132	62	54	50	110	920	2820	1470	285	132	57
20....	145	119	62	52	50	110	930	2610	1430	260	102	55
21....	142	119	58	50	45	110	1120	2560	1470	245	91	53
22....	138	119	56	50	45	111	1270	2560	1430	224	83	52
23....	138	116	54	50	50	104	1150	2560	1360	224	78	53
24....	132	104	50	50	50	80	866	2160	1340	194	74	52
25....	135	100	60	50	60	93	839	1750	1210	245	71	51
26....	142	104	64	50	60	85	1060	1440	1270	260	85	49
27....	135	102	68	50	55	91	1310	1420	1060	255	124	47
28....	127	93	70	50	55	89	1150	1440	950	255	119	48
29....	119	99	68	50	....	80	902	1600	902	306	100	53
30....	148	87	60	50	....	71	785	1560	930	322	98	132
31....	168	....	56	50	....	89	....	1640	....	232	124	....
Total	4759	3800	2084	1623	1376	2535	19708	63633	42402	13828	3728	2292
Mean.	154	127	67.2	52.4	49.1	81.8	657	2050	1410	446	120	76.4
Max.	198	172	100	58	60	111	1310	2990	1870	1220	211	161
Min.	109	87	50	48	45	55	102	803	902	194	71	47
Acre-ft.	9440	7540	4130	3220	2730	5030	39099	126200	84100	27430	7390	4550

Total run-off for water year 1936-37=320,850 acre-feet.

Discharge of Conejos River Near Mogote, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	154	78	38	....	....	57	94	1770	2750	1110	256	120
2....	114	74	40	....	....	51	84	1200	2660	980	209	198
3....	102	72	46	....	....	60	84	1010	2660	896	187	228
4....	89	71	41	....	....	59	92	809	2620	790	240	213
5....	83	67	38	....	....	47	113	684	2700	692	216	205
6....	74	64	37	....	....	51	123	628	2620	620	176	183
7....	69	76	37	....	....	55	110	564	2460	548	170	170
8....	66	78	40	....	....	52	96	491	2270	498	170	176
9....	64	66	40	....	....	55	113	470	2040	477	157	166
10....	63	71	40	....	....	51	176	440	2080	458	157	141
11....	62	72	35	....	....	62	244	464	1930	410	209	291
12....	64	71	35	*44	....	71	324	604	2050	422	224	410
13....	80	54	35	....	....	66	349	668	2330	388	216	452
14....	72	51	35	....	....	63	393	1010	1940	410	278	324
15....	78	57	35	....	*54	62	295	1490	2000	464	264	278
16....	129	52	35	....	....	70	252	1760	1960	505	205	269
17....	124	46	35	....	....	76	286	1790	1840	416	176	252
18....	114	51	35	....	....	71	434	1760	1930	388	163	216
19....	91	46	35	....	....	74	718	1630	1730	360	153	194
20....	89	52	35	....	....	84	958	1300	1690	382	129	176
21....	87	48	35	....	....	94	1150	1320	1750	334	115	157
22....	85	45	35	....	....	84	1150	1350	2000	286	110	141
23....	87	51	35	....	....	73	1450	1250	1840	291	101	138
24....	89	54	35	....	....	103	1590	1440	1440	252	101	132
25....	89	54	35	....	....	141	1650	1720	1400	232	101	132
26....	85	57	35	....	....	187	1650	2000	1390	224	94	123
27....	83	53	35	....	....	160	1380	2270	1440	220	98	115
28....	83	43	35	....	....	126	1450	2580	1150	232	101	110
29....	81	44	35	....	....	110	1700	2940	1390	224	103	106
30....	80	41	35	....	....	94	1830	2800	1390	202	101	96
31....	80	....	35	47	....	80	....	2630	....	190	92	....
Total	2710	1759	1132	1364	1484	2492	20338	42842	59450	13901	5072	5912
Mean.	87.4	58.6	36.5	44	53	80.4	678	1380	1980	448	164	197
Max.	154	78	46	....	....	187	1830	2940	2750	1110	278	452
Min.	62	41	35	....	....	47	84	440	1150	190	92	96
Acre-ft.	5380	3490	2250	2710	2940	4940	40340	84980	117900	27570	10060	11730

Total run-off for water year 1937-38=314,300 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Conejos River Near La Sauces, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	88	119	96	73	102	130	101	999	1500	601	18	6.1
2....	85	133	85	59	93	137	101	1200	1600	672	15	6.1
3....	82	123	86	63	92	143	104	1520	1800	754	13	6.1
4....	89	107	77	68	92	135	119	2090	1730	631	10	6.1
5....	96	123	84	68	98	143	131	2410	1450	534	9.3	6.1
6....	98	148	80	68	110	144	113	2690	1240	434	9.1	9.3
7....	104	149	78	68	117	145	106	2730	1080	318	9.4	15
8....	105	138	75	68	117	150	104	2550	1020	243	8.2	15
9....	102	129	79	68	110	146	111	2770	990	178	8.2	16
10....	100	122	83	68	102	148	147	3130	928	142	8.1	16
11....	101	122	87	70	97	143	411	3010	836	80	8.1	16
12....	96	124	89	75	104	153	595	3100	823	63	8.1	16
13....	94	123	94	80	104	158	976	3010	765	62	8.1	16
14....	91	127	94	85	111	160	1510	3170	732	62	8.1	16
15....	86	128	96	80	116	158	1710	3230	650	62	10	16
16....	81	118	106	75	118	152	2130	3410	588	54	11	16
17....	79	117	116	71	112	154	2550	3280	560	44	11	16
18....	77	122	105	67	106	147	2170	3270	494	43	11	15
19....	76	118	103	64	116	143	1820	3270	468	37	11	15
20....	73	114	102	65	120	122	1860	3110	428	36	10	15
21....	75	110	101	66	120	119	1890	2880	424	31	8.1	13
22....	80	106	101	72	118	115	2200	2590	424	24	7.1	11
23....	83	104	99	73	118	100	2320	2410	398	23	6.1	11
24....	87	100	94	79	116	96	1840	2410	386	24	6.1	10
25....	84	100	94	79	124	104	1340	2100	382	27	6.1	11
26....	86	107	94	79	126	92	1480	1720	715	26	6.1	11
27....	96	108	84	85	122	94	1750	1330	953	23	6.1	11
28....	89	108	82	85	120	101	2050	1180	889	23	6.1	14
29....	87	111	70	90	....	98	1680	1200	756	21	6.1	16
30....	87	101	64	97	....	107	1150	1620	679	21	6.1	18
31....	91	....	44	92	....	108	....	1530	....	20	6.1	....
Total	2748	3559	2742	2300	3101	4045	34569	74919	25688	5313	274.8	384.8
Mean	88.6	119	88.5	74.2	111	130	1152	2417	856	171	8.86	12.8
Max.	105	149	116	97	126	160	2550	3410	1800	754	18	18
Min.	73	100	44	59	92	92	101	999	382	20	6.1	6.1
Acre-ft.	5450	7060	5440	4560	6150	8020	68570	148600	50950	10540	545	763

Total run-off for water year 1936-37=316,600 acre-feet.

Discharge of Conejos River at Mouth Near La Sauces, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	23	41	54	53	57	77	73	2560	1730	648	1.1	0.2
2....	25	42	54	53	58	82	71	2560	1710	517	1.1	4.7
3....	27	43	54	53	58	84	68	1700	1680	453	1.1	6.0
4....	27	43	54	53	60	84	65	1390	1660	386	4.9	14
5....	27	41	54	53	62	82	60	984	1690	324	3.7	25
6....	27	41	54	55	65	80	53	782	1710	245	6.3	27
7....	27	42	54	55	63	78	50	762	1660	155	6.8	27
8....	25	42	54	55	62	76	47	666	1590	74	8.3	25
9....	32	43	55	55	64	76	43	556	1380	66	20	26
10....	34	44	57	55	65	78	33	478	1250	59	17	25
11....	34	44	58	61	67	78	25	424	1250	58	9.7	28
12....	34	44	60	61	76	76	23	486	1150	55	11	34
13....	37	46	65	61	78	79	23	540	1300	54	9.5	72
14....	41	46	66	61	74	78	45	755	1500	52	10	89
15....	41	46	64	61	73	78	97	1180	1310	37	11	69
16....	40	46	62	62	71	76	132	1840	1240	28	8.7	66
17....	39	50	64	62	72	75	126	2120	1140	13	7.6	66
18....	39	49	64	62	74	76	153	2100	1040	7.6	6.8	63
19....	40	49	64	65	69	76	337	1870	962	2.4	5.8	57
20....	47	49	64	63	71	73	718	1460	868	7.6	5.5	54
21....	51	49	64	62	71	74	1190	1210	737	11	4.8	49
22....	47	49	58	61	69	74	1520	1120	730	8.7	2.8	46
23....	46	49	53	62	69	72	1700	1000	773	2.2	1.3	46
24....	46	49	54	62	71	70	2090	895	731	2.2	0.7	42
25....	47	49	55	72	69	69	2450	1070	631	2.1	0.6	37
26....	48	49	54	58	70	69	2480	1240	588	2.1	0.5	34
27....	47	52	53	55	74	69	2540	1450	578	2.1	0.4	32
28....	45	55	54	57	75	71	1920	1700	557	2.2	0.3	31
29....	46	54	54	55	....	73	1970	1940	542	2.2	0.3	25
30....	45	54	55	57	....	74	2330	2190	665	2.2	0.3	24
31....	42	....	54	55	....	74	....	1980	....	2.1	0.3	....
Total	1176	1400	1783	1815	1907	2351	22432	41008	34352	3280.7	168.2	1143.9
Mean	37.9	46.7	57.5	58.5	68.1	75.8	748	1323	1145	106	5.43	38.1
Max.	51	55	66	72	78	84	2540	2560	1730	648	20	89
Min.	23	41	53	53	57	69	23	424	542	2.1	0.3	0.2
Acre-ft.	2330	2780	3540	3600	3780	4660	44490	81340	68140	6510	334	2270

Total run-off for water year 1937-38=223,800 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of San Antonio River at Ortiz, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	12	13	....	....	....	....	10	302	48	16	1.8	5.2
2....	8.8	14	....	....	....	....	10	389	44	8.5	1.2	2.8
3....	7.0	6	....	....	....	....	15	441	74	8.5	4.0	2.0
4....	6.5	6	....	....	....	....	15	437	48	7.5	4.4	9.0
5....	5.6	27	....	....	....	....	25	482	41	4.8	2.4	8.0
6....	5.2	22	....	....	....	....	25	451	35	3.2	2.0	10
7....	9.2	22	....	....	....	....	40	405	31	2.4	1.8	12
8....	9.2	23	....	....	....	....	60	486	28	2.0	0.8	12
9....	9.2	20	....	....	....	....	165	482	26	2.4	0.2	5.6
10....	8.8	17	....	....	....	....	370	431	23	1.6	0	4.0
11....	7.4	19	....	....	....	....	712	461	22	2.8	0	2.8
12....	6.0	17	....	....	....	....	946	380	20	3.2	0.2	1.8
13....	5.6	17	....	....	....	....	1080	373	18	3.2	.4	1.4
14....	4.7	18	....	....	....	....	1040	345	17	1.8	1.0	1.4
15....	4.4	21	....	....	....	....	1060	333	16	1.2	0.4	1.6
16....	4.1	17	....	....	....	....	960	284	15	0.8	3.6	1.4
17....	4.1	14	....	....	....	....	669	262	12	.6	5.0	1.8
18....	4.1	12	....	....	....	....	510	230	12	.4	13	2.8
19....	3.5	8	....	....	....	....	567	225	10	.0	8.0	2.0
20....	5.2	15	....	....	....	....	567	167	9.0	.0	5.6	2.0
21....	12	15	....	....	....	....	640	126	8.5	.0	3.6	1.4
22....	8.3	16	....	....	....	....	673	108	11	.0	2.4	1.0
23....	8.3	16	....	....	....	....	574	102	8.5	.0	1.8	1.4
24....	8.3	13	....	....	....	....	373	112	6.0	.0	1.4	2.4
25....	7.8	14	....	....	....	....	290	96	5.6	.0	1.2	1.8
26....	9.8	10	....	....	....	....	376	83	15	.0	1.2	1.4
27....	9.2	8	....	....	....	....	475	72	18	.0	2.4	0.8
28....	8.8	6	....	....	....	....	421	64	12	2.0	1.8	0.8
29....	9.2	9	....	....	....	....	287	74	8.5	3.2	10	1.0
30....	7.8	6	....	....	....	....	243	81	9.0	5.6	10	4.0
31....	16	....	....	....	....	....	....	60	....	3.6	13	....
Total	235.2	441	....	....	....	....	13198	8344	651.1	85.3	165.8	105.6
Mean.	7.59	14.7	....	....	....	....	440	269	21.7	2.75	5.35	3.52
Max..	12	27	....	....	....	....	1080	486	74	16	50	12
Min..	3.5	6	....	....	....	....	10	60	5.6	0	0	0.8
Acre-ft.	467	875	....	....	....	....	26180	16550	1290	169	329	209

Total run-off for period=46,069 acre-feet.

Discharge of San Antonio River Near Ortiz, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	12	4.0	....	....	....	....	6.0	549	41	5.9	0.4	4.1
2....	7.5	3.6	....	....	....	....	6.0	299	37	4.4	0.4	2.9
3....	4.4	3.2	....	....	....	....	5.0	278	35	2.9	0.4	6.4
4....	3.2	3.6	....	....	....	....	7.0	188	32	2.0	10	11
5....	2.4	3.2	....	....	....	....	9.5	145	28	1.6	2.9	5.9
6....	1.6	3.6	....	....	....	....	10	136	26	1.1	1.4	3.5
7....	1.6	....	....	....	....	....	15	120	24	0.8	0.6	11
8....	1.6	....	....	....	....	....	30	104	23	0.8	2.6	7.7
9....	1.8	....	....	....	....	....	40	101	21	0.6	1.4	5.0
10....	1.8	....	....	....	....	....	27	102	18	0.6	1.1	3.2
11....	1.8	....	....	....	....	....	36	120	18	0.6	6.4	2.9
12....	2.4	....	....	....	....	....	76	172	16	1.4	8.2	6.4
13....	5.2	....	....	....	....	....	82	218	16	1.8	7.2	12
14....	5.6	....	....	....	....	....	94	275	19	1.7	6.8	6.8
15....	4.0	....	....	....	....	....	72	336	14	3.2	3.2	4.1
16....	7.5	....	....	....	....	....	64	296	12	6.8	1.7	4.7
17....	12	....	....	....	....	....	106	259	10	6.4	1.4	5.9
18....	8.5	....	....	....	....	....	200	222	9.0	4.4	1.1	4.7
19....	6.0	....	....	....	....	....	273	198	7.7	4.7	1.0	4.1
20....	4.4	....	....	....	....	....	320	163	6.8	3.5	0.8	3.8
21....	3.2	....	....	....	....	....	489	152	6.4	6.8	0.6	2.6
22....	3.6	....	....	....	....	....	465	128	5.4	5.0	0.4	2.0
23....	3.6	....	....	....	....	....	510	122	5.9	2.9	0.2	2.0
24....	3.2	....	....	....	....	....	520	98	7.2	1.7	0.1	2.3
25....	3.2	....	....	....	....	....	542	94	6.4	1.1	0.1	2.9
26....	3.2	....	....	....	....	....	520	86	5.4	0.4	0.4	3.2
27....	3.2	....	....	....	....	....	345	77	12	0.4	0.3	2.9
28....	3.2	....	....	....	....	....	364	68	14	2.6	0.2	2.6
29....	3.2	....	....	....	....	....	424	61	10	2.0	0.2	2.6
30....	3.2	Nov. 1	....	....	....	....	574	52	8.6	1.0	1.0	2.9
31....	3.2	to 6	....	....	....	....	....	45	....	0.8	12	....
Total	131.3	21.2	....	....	....	....	6231.5	5264	494.8	79.9	74.5	142.1
Mean.	4.24	3.53	....	....	....	....	208	170	16.5	2.58	2.40	4.74
Max..	12	4.0	....	....	....	....	574	549	41	6.8	12	12
Min..	1.6	3.2	....	....	....	....	5.0	45	5.4	0.4	0.1	2.0
Acre-ft.	260	42	....	....	....	....	12360	10440	981	158	148	282

Total run-off for period=24,671 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of San Antonio River at Mouth Near Manassa, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	48	17	13	16	32	30	732	516	143	0.3	0
2....	12	45	18	13	16	34	49	1020	510	144	.2	0
3....	13	26	12	13	16	36	60	1310	580	155	.2	0
4....	13	23	11	13	16	38	65	1410	497	133	.2	0
5....	13	37	11	13	16	40	60	1460	416	110	.2	0
6....	13	44	7	13	18	44	54	1480	352	87	.2	0
7....	15	47	11	13	18	48	50	1400	309	59	.2	0
8....	14	41	10	13	18	54	49	1400	287	46	.1	0
9....	13	36	11	13	18	52	70	1480	270	33	.1	0
10....	16	36	10	13	18	52	123	1470	254	19	.1	0
11....	13	33	10	13	18	48	338	1470	240	14	.1	0
12....	11	32	11	13	18	46	728	1450	226	12	.1	0
13....	10	27	12	13	18	44	1140	1450	212	8.6	.1	0
14....	10	30	12	13	18	42	1180	1460	209	2.3	.1	0
15....	9.8	34	13	13	18	40	1330	1480	196	1.5	.1	0
16....	11	35	14	13	20	40	1520	1420	183	1.0	0	0
17....	9.8	35	14	13	20	40	1480	1390	165	0.8	0	0
18....	9.0	33	12	13	20	34	1120	1370	152	.7	0	0
19....	8.6	28	13	13	20	27	1180	1330	138	.7	0	0
20....	12	28	14	13	20	24	1150	1290	133	.6	0	0
21....	25	28	15	13	20	18	1290	1150	133	.6	0	0
22....	31	26	15	13	20	13	1350	1000	130	.5	0	0
23....	28	24	15	13	20	13	1420	914	122	.4	0	0
24....	28	21	16	13	20	11	1040	888	111	.4	0	0
25....	25	25	15	13	20	11	776	797	151	.4	0	0
26....	28	28	16	16	25	13	914	660	244	.4	0	0
27....	29	21	12	16	25	19	1240	555	244	.4	0	0
28....	31	21	13	16	25	24	1340	494	205	.4	0	0
29....	29	19	13	16	....	25	1040	562	172	.4	0	0
30....	29	18	13	16	....	32	736	664	152	.4	0	0
31....	40	....	14	16	....	27	....	566	....	.3	0	0
Total	563.2	329	400	421	535	1021	22925	35522	759	975.7	2.3	0
Mean	18.2	31.0	12.9	13.6	19.1	32.9	764	1146	250	31.5	.074	0
Max.	40	48	18	16	25	54	1520	1480	580	155	0.3	0
Min.	8.6	18	7	13	16	11	30	494	111	0.3	0	0
Acres-ft.	1120	1840	793	835	1060	2030	45470	70460	14890	1940	4.6	0

Total run-off for water year 1936-37=140,400 acre-feet.

Discharge of San Antonio River at Mouth Near Manassa, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0	0.1	0.2	....	0.5	4.0	8.2	1450	572	156	2.8	0.2
2....	0	0.1	0.2	....	0.5	4.0	10	1200	552	136	2.6	0.4
3....	0	0.2	0.2	....	0.5	4.0	10	1080	529	110	3.1	0.3
4....	0	0.2	0.2	....	0.5	4.0	11	839	494	88	3.7	0.4
5....	0	0.2	0.3	....	0.5	4.0	8.8	611	456	62	7.8	0.4
6....	0	0.2	0.3	....	3.0	3.0	11	548	418	33	8.2	0.3
7....	0	0.2	0.3	....	2.0	3.0	13	459	381	19	7.8	0.2
8....	0	0.3	0.3	....	3.0	3.0	11	365	345	8.5	5.5	0.2
9....	0	0.3	0.3	....	3.0	3.0	9.0	338	316	6.8	3.9	0.1
10....	0	0.3	0.3	....	3.0	3.0	8.0	319	309	6.0	3.1	0.1
11....	0	0.3	0.3	....	6.0	3.0	6.0	321	280	5.2	2.9	0.3
12....	0	0.3	0.3	*0.8	6.0	3.0	10	424	254	5.0	2.6	0.9
13....	0	0.3	0.3	....	6.0	3.0	30	516	280	4.8	2.3	0.5
14....	0	0.3	0.3	....	6.0	3.0	47	892	307	4.7	2.0	0.3
15....	0	0.3	0.3	....	*6.0	3.0	35	1240	265	3.4	2.0	0.2
16....	0	0.2	0.2	....	6.0	3.0	39	1360	240	9.5	1.5	0.4
17....	0	0.2	0.2	....	6.0	3.1	47	1340	216	12	1.2	0.6
18....	0	0.3	0.2	....	6.0	3.1	113	1250	198	11	0.6	0.9
19....	0	0.2	0.2	....	6.0	3.1	280	1120	190	6.5	0.3	3.6
20....	0.1	0.2	0.2	....	6.0	3.1	491	896	176	6.0	0.2	3.6
21....	0.1	0.2	0.2	....	4.0	3.2	861	874	158	6.8	0.2	3.6
22....	0.1	0.2	0.2	....	4.0	3.6	1000	780	143	7.0	0.1	3.9
23....	0.1	0.2	0.2	....	4.0	3.1	1160	692	168	5.8	0.1	3.6
24....	0.1	0.3	0.2	....	4.0	3.1	1270	646	188	4.5	0.2	3.6
25....	0.1	0.3	0.2	....	4.0	2.8	1320	704	160	3.9	0.2	3.4
26....	0.1	0.3	0.2	....	4.0	2.8	1370	780	160	3.2	0.1	3.1
27....	0.1	0.3	0.2	....	4.0	4.2	1210	784	168	3.1	0.1	2.8
28....	0.1	0.3	0.2	....	4.0	4.7	1120	784	202	3.6	0.2	2.6
29....	0.1	0.3	0.2	....	....	5.0	1280	835	192	4.0	0.1	2.3
30....	0.1	0.2	0.2	....	....	7.5	1380	764	186	3.7	0.1	2.0
31....	0.2	....	0.2	*0.4	....	6.8	....	628	....	3.2	0	....
Total	1.3	7.3	7.3	15.5	109.5	112.2	13169.0	24859	8503	742.2	65.5	44.8
Mean	0.04	0.24	0.24	0.50	3.91	3.62	439	801	283	23.9	2.11	1.49
Max.	0.2	0.3	0.3	....	6.0	7.5	1380	1450	572	156	8.2	3.9
Min.	0	0.1	0.2	....	0.5	2.8	6.0	319	143	3.1	0	0.1
Acres-ft.	3.0	14	14	31	217	223	26120	49270	16870	1470	130	89

Total run-off for water year 1937-38=94,460 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Los Pinos River Near Ortiz, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	60	82	....	....	....	....	40	675	628	177	39	20
2....	60	55	....	....	....	....	45	1096	600	193	36	16
3....	58	40	....	....	....	....	50	1410	586	171	32	15
4....	55	30	....	....	....	....	55	1490	506	144	31	18
5....	44	50	....	....	....	....	59	1720	454	125	40	20
6....	49	70	....	....	....	....	54	1550	399	120	30	23
7....	46	70	....	....	....	....	55	1390	376	114	26	35
8....	52	60	....	....	....	....	55	1870	387	100	25	25
9....	65	42	....	....	....	....	55	1830	372	90	23	19
10....	51	30	....	....	....	....	55	1710	354	96	20	17
11....	48	38	....	....	....	....	110	1740	369	94	18	15
12....	45	48	....	....	....	....	250	1650	361	105	16	14
13....	44	55	....	....	....	....	500	1760	350	84	15	13
14....	45	58	....	....	....	....	759	1920	332	73	14	14
15....	45	57	....	....	....	....	1080	1750	311	64	16	14
16....	41	55	....	....	....	....	1260	1540	311	58	16	14
17....	39	52	....	....	....	....	1000	1610	318	53	16	14
18....	36	49	....	....	....	....	804	1460	322	48	18	14
19....	35	57	....	....	....	....	881	1360	300	44	21	14
20....	78	49	....	....	....	....	956	1190	280	41	17	13
21....	65	49	....	....	....	....	1130	1060	280	41	16	13
22....	54	42	....	....	....	....	1280	968	275	38	12	13
23....	57	37	....	....	....	....	1090	912	275	34	13	11
24....	46	52	....	....	....	....	716	804	268	35	12	14
25....	58	52	....	....	....	....	656	716	255	43	12	13
26....	54	48	....	....	....	....	930	632	255	39	19	12
27....	57	44	....	....	....	....	1220	618	240	43	29	11
28....	54	40	....	....	....	....	1080	609	202	39	25	11
29....	55	42	....	....	....	....	695	706	180	52	19	13
30....	70	38	....	....	....	....	572	690	171	76	29	44
31....	99	....	....	....	....	....	....	641	....	38	25	....
Total	1665	1491	....	....	....	....	17492	39071	10317	2472	680	502
Mean.	53.7	49.7	....	....	....	....	583	1260	344	79.7	21.9	16.7
Max..	99	82	....	....	....	....	1280	1920	628	193	40	44
Min..	35	30	....	....	....	....	40	609	171	34	12	11
Acre-ft.	3300	2960	....	....	....	....	34690	77500	20460	4900	1350	996

Total run-off for period=146,156 acre-feet.

Discharge of Los Pinos River Near Ortiz, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	47	16	....	....	....	....	39	1310	682	166	35	24
2....	26	15	....	....	....	....	39	851	672	145	34	37
3....	23	14	....	....	....	....	32	740	662	124	30	40
4....	18	14	....	....	....	....	36	550	627	110	35	37
5....	17	14	....	....	....	....	43	469	617	102	33	31
6....	15	13	....	....	....	....	47	424	581	91	28	38
7....	14	....	....	....	....	....	48	359	545	80	26	40
8....	14	....	....	....	....	....	47	310	482	72	25	33
9....	14	....	....	....	....	....	47	297	465	62	27	34
10....	14	....	....	....	....	....	62	286	440	58	26	26
11....	14	....	....	....	....	....	86	352	404	58	37	46
12....	14	....	....	....	....	....	116	469	397	55	37	72
13....	17	....	....	....	....	....	141	608	465	53	38	78
14....	16	....	....	....	....	....	141	1020	397	74	44	44
15....	17	....	....	....	....	....	111	1160	359	168	37	37
16....	47	....	....	....	....	....	111	1320	334	134	27	40
17....	35	....	....	....	....	....	166	1220	317	114	24	48
18....	34	....	....	....	....	....	258	1160	303	78	22	35
19....	24	....	....	....	....	....	418	949	283	87	19	38
20....	20	....	....	....	....	....	586	857	269	93	16	30
21....	23	....	....	....	....	....	833	863	256	89	15	28
22....	21	....	....	....	....	....	937	762	280	66	14	27
23....	21	....	....	....	....	....	1280	735	276	60	14	27
24....	20	....	....	....	....	....	1360	751	237	53	16	27
25....	20	....	....	....	....	....	1420	828	216	46	17	30
26....	19	....	....	....	....	....	1420	881	207	43	16	28
27....	19	....	....	....	....	....	962	869	225	43	16	25
28....	18	....	....	....	....	....	1120	918	201	40	22	25
29....	18	....	....	....	....	....	1360	918	225	41	19	27
30....	17	Nov. 1	....	....	....	....	1600	756	201	37	18	25
31....	17	to 6	....	....	....	....	....	677	....	35	19	....
Total	653	86	....	....	....	....	14866	23669	11625	2477	786	1077
Mean.	21.1	14.3	....	....	....	....	496	764	388	79.9	25.4	35.9
Max..	47	16	....	....	....	....	1600	1320	682	168	44	78
Min..	14	13	....	....	....	....	32	286	201	35	14	24
Acre-ft.	1300	171	....	....	....	....	29490	46950	23060	4910	1560	2140

Total run-off for period=109,581 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Culebra River at San Luis, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	27	16	30	....	....	26	26	22	114	133	166	45
2....	26	26	30	....	....	27	27	16	116	129	193	42
3....	25	31	29	....	....	28	27	24	76	95	198	43
4....	17	39	29	....	....	27	18	28	49	81	185	40
5....	24	40	28	....	....	27	33	29	32	132	190	35
6....	27	38	26	....	....	27	31	30	19	189	172	30
7....	26	36	24	....	....	19	33	30	34	204	136	28
8....	24	34	26	....	....	30	31	28	65	202	121	25
9....	24	33	26	....	....	33	29	34	76	198	144	28
10....	23	33	24	....	....	31	26	56	99	186	144	36
11....	17	33	23	....	....	30	16	50	106	178	144	31
12....	22	32	23	....	....	28	33	45	104	79	132	16
13....	31	31	12	....	....	30	28	66	121	166	131	33
14....	28	30	19	....	....	29	36	100	194	208	109	36
15....	27	15	25	....	....	28	39	93	254	196	100	36
16....	26	31	26	....	....	30	40	79	277	194	104	36
17....	22	28	26	....	....	31	37	165	288	199	101	36
18....	16	27	25	....	....	30	25	203	278	182	86	31
19....	20	26	23	....	....	27	28	220	261	211	79	18
20....	26	27	13	....	....	27	31	184	246	221	69	20
21....	24	29	23	....	....	16	28	211	261	219	73	24
22....	25	30	26	....	27	20	28	220	242	211	84	32
23....	23	30	25	....	27	26	28	222	230	217	98	32
24....	22	30	23	....	28	27	30	220	225	203	91	31
25....	16	30	15	....	27	24	24	216	212	202	83	30
26....	20	31	24	....	26	16	26	222	150	229	68	19
27....	21	31	13	....	25	16	24	244	99	232	50	22
28....	24	31	24	....	14	16	24	237	79	213	62	31
29....	24	24	26	....	....	22	26	178	104	212	47	32
30....	25	29	23	....	....	26	23	99	120	224	48	40
31....	25	....	17	....	....	26	....	100	....	220	51	....
Total	737	901	726	775	700	800	855	3671	4531	5765	3459	938
Mean.	23.5	30.0	23.4	25	25	25.8	28.5	118	151	186	112	31.3
Max..	31	40	30	....	....	33	40	244	288	232	198	45
Min..	16	15	12	....	....	16	16	16	19	79	47	16
Acre-ft.	1440	1790	1440	1540	1390	1590	1700	7280	8990	11430	6860	1860

Total run-off for water year 1936-37=47,310 acre-feet.

Discharge of Culebra River Near San Luis, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	33	29	28	27	27	20	30	23	279	206	219	62
2....	33	28	28	27	27	19	28	29	266	162	265	62
3....	33	28	29	28	28	22	18	29	266	89	279	41
4....	33	28	27	27	27	30	28	24	291	22	190	40
5....	35	27	16	27	27	29	28	23	284	138	137	38
6....	35	27	28	26	27	29	28	27	285	224	108	37
7....	32	29	28	25	27	29	25	27	258	241	101	37
8....	32	28	27	24	27	29	25	16	252	257	141	38
9....	32	28	27	12	27	29	24	22	272	264	151	38
10....	30	28	28	27	27	29	18	22	265	248	148	35
11....	31	29	26	24	29	30	25	22	224	262	134	39
12....	33	29	18	24	28	30	26	24	178	220	116	39
13....	33	29	27	26	18	18	26	30	182	259	86	33
14....	33	29	29	26	29	28	28	33	143	248	81	32
15....	33	28	28	26	29	30	26	17	118	241	75	33
16....	40	28	28	26	28	32	33	28	143	209	86	34
17....	39	28	27	26	28	30	22	29	188	199	102	34
18....	30	29	25	26	28	30	32	55	199	219	91	22
19....	27	29	15	27	26	30	35	44	155	233	84	31
20....	29	29	28	27	17	29	38	40	244	233	84	30
21....	32	28	28	26	28	30	41	33	261	218	85	29
22....	30	28	27	26	29	29	34	26	269	213	89	25
23....	29	28	28	15	29	30	31	54	269	194	108	32
24....	29	28	26	22	26	29	14	50	269	152	100	30
25....	29	28	16	24	17	28	27	59	236	178	91	32
26....	29	28	17	27	17	26	29	75	202	191	91	31
27....	29	25	27	28	17	18	34	96	208	206	90	41
28....	29	16	27	27	18	29	28	90	227	205	66	35
29....	29	28	27	27	....	32	35	146	229	194	48	32
30....	29	28	27	27	....	29	38	142	213	185	43	31
31....	29	....	27	28	....	30	....	194	....	181	59	....
Total	979	832	794	785	712	862	854	1529	6875	6291	3548	1073
Mean.	31.6	27.7	25.6	25.3	25.4	27.8	28.5	49.3	229	203	114	35.8
Max..	40	29	29	28	29	32	41	194	291	264	279	62
Min..	27	16	15	12	17	18	14	16	118	22	43	22
Acre-ft.	1940	1650	1570	1560	1410	1710	1690	3030	13640	12480	7040	2130

Total run-off for water year 1937-38=49,850 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Garita Creek Near La Garita, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	8.8	.....	.....	.....	.....	3	66	23	14	9	7.0
2....	15	8.8	.....	.....	.....	.....	3	63	31	13	7	7.0
3....	14	4.0	.....	.....	.....	.....	3	41	30	9.9	11	8.3
4....	12	5	.....	.....	.....	.....	3	40	26	8.3	10	9.9
5....	10	10	.....	.....	.....	.....	3	49	24	7.8	9.4	6.6
6....	10	3.5	.....	.....	.....	.....	3	38	23	7.8	8.9	9.4
7....	12	3.5	.....	.....	.....	.....	3.2	31	21	7.8	7.8	8.9
8....	9.5	3.5	.....	.....	.....	.....	3.5	27	19	7.0	7.0	7.8
9....	9.5	4.5	.....	.....	.....	.....	3.0	29	19	7.0	6.6	7.8
10....	10	5	.....	.....	.....	.....	3.8	44	19	7.0	5.8	6.2
11....	8.8	4.5	.....	.....	.....	.....	6.2	37	19	8.3	4.6	5.4
12....	6.7	5	.....	.....	.....	.....	9.9	38	18	12	6.6	5.0
13....	6.0	6	.....	.....	.....	.....	14	41	17	9.9	5.0	4.6
14....	6.0	7	.....	.....	.....	.....	29	44	16	10	5.0	3.8
15....	6.0	8.8	.....	.....	.....	.....	78	46	16	9	5.0	3.5
16....	6.0	8.1	.....	.....	.....	.....	87	49	16	8	9.9	3.5
17....	6.0	7.4	.....	.....	.....	.....	40	44	16	7	6.6	3.8
18....	6.0	8.1	.....	.....	.....	.....	22	37	15	7	8.9	3.5
19....	5.6	6.7	.....	.....	.....	.....	31	40	14	6	5.8	3.2
20....	6.7	5	.....	.....	.....	.....	28	36	13	6	5.0	3.2
21....	8.1	3.5	.....	.....	.....	.....	31	34	13	6	5.0	3.2
22....	8.1	3.0	.....	.....	.....	.....	38	30	13	6	4.6	3.5
23....	11	2.0	.....	.....	.....	.....	31	29	13	6	4.2	3.5
24....	8.1	2.0	.....	.....	.....	.....	21	29	14	7	4.6	3.2
25....	8.8	2.0	.....	.....	.....	.....	34	30	13	7	6.2	3.2
26....	8.1	2.0	.....	.....	.....	.....	51	29	16	9	7.0	3.0
27....	7.4	2.0	.....	.....	.....	.....	36	28	19	15	7.8	3.0
28....	9.5	2.0	.....	.....	.....	.....	27	33	13	20	7.0	3.0
29....	8.1	1.5	.....	.....	.....	.....	38	43	13	22	6.2	3.0
30....	11	1.5	.....	.....	.....	.....	56	30	14	18	9.4	6.6
31....	8.8	.....	.....	.....	.....	.....	.....	26	.....	13	8.3	.....
Total	277.8	144.7	.....	.....	.....	.....	739.6	1181	536	301.8	215.2	153.6
Mean.	8.96	4.82	.....	.....	.....	.....	24.7	38.1	17.9	9.74	6.94	5.12
Max..	15	10	.....	.....	.....	.....	87	66	31	22	11	9.9
Min..	5.6	1.5	.....	.....	.....	.....	3	26	13	6	4.2	3.0
Acres-ft.	551	287	.....	.....	.....	.....	1470	2340	1060	599	427	305

Total run-off for period=7,039 acre-feet.

Discharge of La Garita Creek Near La Garita, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	7.0	.....	.....	.....	.....	.....	4.2	105	97	21	7.7	7.3
2....	5.8	.....	.....	.....	.....	.....	4.5	68	95	19	7.7	14
3....	4.6	.....	.....	.....	.....	.....	3.2	67	97	18	9.0	11
4....	4.2	.....	.....	.....	.....	.....	3.2	51	85	16	8.2	9.6
5....	3.5	.....	.....	.....	.....	.....	4.8	45	80	17	7.3	9.0
6....	3.0	.....	.....	.....	.....	.....	4.5	45	83	17	6.5	8.9
7....	4.2	.....	.....	.....	.....	.....	4.5	36	72	16	6.1	8.6
8....	4.6	.....	.....	.....	.....	.....	4.8	37	72	15	6.9	8.2
9....	4.6	.....	.....	.....	.....	.....	4.8	38	59	14	6.9	9.6
10....	4.6	.....	.....	.....	.....	.....	5.2	38	56	13	7.3	7.7
11....	4.2	.....	.....	.....	.....	.....	6.9	48	51	13	10	24
12....	5.0	.....	.....	.....	.....	.....	12	61	51	13	9.0	22
13....	5.8	.....	.....	.....	.....	.....	15	67	57	18	8.2	17
14....	5.4	.....	.....	.....	.....	.....	12	88	51	47	9.0	13
15....	5.0	.....	.....	.....	.....	.....	13	118	45	31	7.3	14
16....	5.0	.....	.....	.....	.....	.....	11	123	46	18	6.9	14
17....	4.6	.....	.....	.....	.....	.....	17	90	41	16	6.9	15
18....	5.0	.....	.....	.....	.....	.....	22	80	36	15	6.1	13
19....	3.2	.....	.....	.....	.....	.....	39	78	32	13	5.6	12
20....	4.2	.....	.....	.....	.....	.....	63	78	30	14	4.8	11
21....	5.0	.....	.....	.....	.....	.....	63	80	32	14	4.8	11
22....	4.6	.....	.....	.....	.....	.....	83	76	36	13	5.6	11
23....	4.6	.....	.....	.....	.....	.....	92	68	48	13	6.9	11
24....	4.2	.....	.....	.....	.....	.....	78	72	45	11	6.1	10
25....	3.8	.....	.....	.....	.....	.....	80	74	41	10	4.8	10
26....	3.5	.....	.....	.....	.....	.....	80	83	36	11	4.5	9.6
27....	3.5	.....	.....	.....	.....	.....	72	88	34	12	4.2	8.2
28....	3.5	.....	.....	.....	.....	.....	83	100	31	11	4.8	8.2
29....	3.5	.....	.....	.....	.....	.....	120	131	29	9.6	6.9	8.2
30....	3.5	.....	.....	.....	.....	.....	115	123	26	8.6	6.5	7.7
31....	3.5	.....	.....	.....	.....	.....	.....	102	.....	8.2	6.5	.....
Total	136.7	.....	.....	.....	.....	.....	1120.6	2358	1594	485.4	209.0	343.5
Mean.	4.41	.....	.....	.....	.....	.....	37.4	76.1	53.1	15.7	6.74	11.4
Max..	7.0	.....	.....	.....	.....	.....	120	131	97	47	10	24
Min..	3.0	.....	.....	.....	.....	.....	3.2	36	26	8.2	4.2	7.3
Acres-ft.	271	.....	.....	.....	.....	.....	2220	4680	3160	963	415	681

Run-off for period=12,390 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Carnero Creek Near La Garita, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	7.6	....	....	....	....	8	19	29	12	10	6.5
2....	14	6.3	....	....	....	....	8	24	30	11	6	6.0
3....	12	4.5	....	....	....	....	10	27	33	9.2	5	5.4
4....	11	5	....	....	....	....	10	27	33	7.7	4.6	8.8
5....	9.8	5	....	....	....	....	10	30	32	6.5	4.6	10
6....	9.4	6	....	....	....	....	11	29	32	6.0	5.2	7.7
7....	8.9	6	....	....	....	....	12	28	28	6.2	4.3	10
8....	8.9	7	....	....	....	....	12	29	26	6.0	3.8	8.1
9....	8.1	7	....	....	....	....	19	34	24	5.7	3.3	5.4
10....	7.6	7	....	....	....	....	16	35	21	5.7	3.1	4.1
11....	6.7	8	....	....	....	....	23	30	20	7.3	2.7	3.4
12....	6.3	6	....	....	....	....	50	29	20	9.2	2.7	3.1
13....	6.0	7	....	....	....	....	74	29	19	10	2.7	2.9
14....	6.0	6.0	....	....	....	....	76	30	17	9	3.1	2.7
15....	6.0	6.7	....	....	....	....	74	32	16	7	3.1	2.7
16....	6.0	6.0	....	....	....	....	93	32	15	6	4.3	2.9
17....	5.8	5.8	....	....	....	....	59	32	14	5	5.7	3.1
18....	5.8	5.5	....	....	....	....	35	33	13	5	6.2	2.9
19....	5.8	5	....	....	....	....	40	32	12	4	3.6	2.7
20....	6.7	5	....	....	....	....	40	30	11	4	2.9	2.5
21....	7.2	6	....	....	....	....	39	29	10	4	2.5	2.5
22....	6.7	4.5	....	....	....	....	44	27	10	4	2.4	2.9
23....	8.1	3.5	....	....	....	....	34	28	9.2	3	2.2	3.1
24....	7.2	3.5	....	....	....	....	23	29	9.6	3	2.0	2.9
25....	8.5	3.5	....	....	....	....	21	29	9.6	3	2.4	2.7
26....	8.5	3.5	....	....	....	....	29	30	16	5	2.2	2.5
27....	6.7	3.5	....	....	....	....	34	27	23	10	2.9	2.4
28....	8.1	3.5	....	....	....	....	26	26	13	16	2.9	2.4
29....	6.3	3.0	....	....	....	....	20	33	10	18	5.4	2.4
30....	8.9	3.0	....	....	....	....	19	42	10	15	6.0	2.5
31....	8.9	....	....	....	....	....	....	33	....	13	7.7	....
Total	250.9	159.9	....	....	....	....	969	324	565.4	236.5	125.5	127.2
Mean	8.09	5.33	....	....	....	....	32.3	29.8	18.8	7.63	4.05	4.24
Max.	15	8.0	....	....	....	....	93	42	33	18	10	10
Min.	5.8	3.0	....	....	....	....	8	19	9.2	3	2	2.4
Acre-ft.	498	317	....	....	....	....	1920	1830	1120	469	249	252

Total run-off for period=6,655 acre-feet.

Discharge of Carnero Creek Near La Garita, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.4	....	....	....	....	....	22	87	66	19	5.7	12
2....	4.3	....	....	....	....	....	19	66	63	18	4.8	27
3....	4.1	....	....	....	....	....	11	64	62	14	6.2	20
4....	3.6	....	....	....	....	....	16	56	60	13	6.5	17
5....	3.4	....	....	....	....	....	14	51	56	12	5.4	17
6....	3.3	....	....	....	....	....	14	46	58	12	4.8	17
7....	3.3	....	....	....	....	....	17	38	57	12	4.8	14
8....	3.3	....	....	....	....	....	22	43	58	11	6.0	15
9....	3.3	....	....	....	....	....	21	48	51	9.7	5.1	17
10....	3.3	....	....	....	....	....	22	56	50	10	7.2	14
11....	3.3	....	....	....	....	....	24	66	50	9.7	9.7	27
12....	3.6	....	....	....	....	....	31	80	44	10	9.3	24
13....	4.3	....	....	....	....	....	37	87	46	11	12	23
14....	4.1	....	....	....	....	....	25	100	47	15	8.1	19
15....	4.1	....	....	....	....	....	15	116	38	17	8.1	16
16....	4.6	....	....	....	....	....	21	122	35	12	6.2	16
17....	4.6	....	....	....	....	....	27	98	32	10	6.0	17
18....	4.3	....	....	....	....	....	46	87	31	10	5.4	16
19....	3.8	....	....	....	....	....	58	85	28	9.3	4.8	14
20....	3.6	....	....	....	....	....	83	80	27	10	4.0	15
21....	3.6	....	....	....	....	....	80	80	28	11	3.9	15
22....	3.3	....	....	....	....	....	85	80	28	16	3.6	15
23....	3.1	....	....	....	....	....	98	73	42	12	3.6	14
24....	3.3	....	....	....	....	....	87	71	34	8.9	4.0	14
25....	3.3	....	....	....	....	....	83	68	28	8.9	3.7	14
26....	3.1	....	....	....	....	....	81	68	25	10	3.6	12
27....	2.9	....	....	....	....	....	62	69	25	14	3.6	12
28....	2.9	....	....	....	....	....	64	71	23	11	3.9	11
29....	3.0	....	....	....	....	....	69	80	21	8.5	6.0	9.7
30....	3.0	....	....	....	....	....	76	76	20	7.2	8.5	9.3
31....	3.0	....	....	....	....	....	....	69	....	6.5	8.1	....
Total	112.1	....	....	....	....	....	1330	2281	1233	358.7	182.6	483.0
Mean	3.62	....	....	....	....	....	44.3	73.6	41.1	11.6	5.89	16.1
Max.	5.4	....	....	....	....	....	98	122	66	19	12	27
Min.	2.9	....	....	....	....	....	11	38	20	6.5	3.6	9.3
Acre-ft.	222	....	....	....	....	....	2640	4520	2450	711	362	958

Total run-off during period=11,863 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Saguache Creek Near Saguache, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	57	43	....	....	....	....	....	60	136	109	64	46
2....	54	41	....	....	....	....	....	85	121	100	61	41
3....	50	41	....	....	....	....	....	131	147	85	74	54
4....	48	41	....	....	....	....	....	139	149	78	60	45
5....	47	46	....	....	....	....	Apr. 7	157	131	71	58	40
6....	47	47	....	....	....	....	to 30	157	114	67	61	41
7....	48	40	....	....	....	....	41	139	107	67	56	48
8....	46	37	....	....	....	....	38	136	104	64	48	45
9....	46	37	....	....	....	....	38	162	102	51	45	40
10....	44	41	....	....	....	....	39	188	104	57	41	38
11....	42	35	....	....	....	....	45	175	94	58	39	36
12....	41	35	....	....	....	....	48	162	89	66	38	36
13....	40	34	....	....	....	....	72	155	92	79	38	36
14....	40	34	....	....	....	....	155	153	94	64	38	35
15....	39	37	....	....	....	....	230	162	94	57	38	35
16....	39	37	....	....	....	....	282	164	94	50	38	35
17....	38	39	....	....	....	....	259	164	102	47	43	35
18....	37	39	....	....	....	....	131	170	109	46	40	34
19....	35	39	....	....	....	....	129	173	104	44	38	34
20....	37	35	....	....	....	....	119	162	100	41	36	35
21....	41	33	....	....	....	....	107	149	100	40	35	35
22....	40	30	....	....	....	....	155	149	107	38	34	36
23....	41	30	....	....	....	....	126	152	102	38	34	36
24....	39	27	....	....	....	....	76	155	102	38	34	35
25....	38	28	....	....	....	....	61	149	100	40	34	34
26....	45	28	....	....	....	....	85	147	131	66	35	34
27....	40	28	....	....	....	....	144	131	173	76	36	34
28....	39	27	....	....	....	....	100	124	121	87	36	34
29....	38	26	....	....	....	....	72	152	114	109	36	35
30....	41	26	....	....	....	....	56	222	114	96	36	40
31....	45	....	....	....	....	....	....	168	....	85	47	....
Total	1322	1061	....	....	....	....	2608	4692	3351	2014	1351	1142
Mean..	42.6	35.4	....	....	....	....	109	151	112	65.0	43.6	38.1
Max...	57	47	....	....	....	....	282	222	173	109	74	54
Min...	35	26	....	....	....	....	38	60	89	38	34	34
Acre-ft.	2620	2100	....	....	....	....	5170	9310	6650	3990	2680	2270

Total run-off for period=34,790 acre-feet.

Discharge of Saguache Creek Near Saguache, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	43	37	31	....	....	....	32	265	380	186	50	45
2....	41	36	34	....	....	....	34	183	378	169	50	52
3....	40	36	34	....	....	....	36	159	352	152	53	67
4....	40	36	34	....	....	....	36	135	366	137	50	60
5....	40	36	36	....	....	....	40	117	383	126	47	60
6....	38	35	35	....	....	....	41	124	364	124	45	52
7....	38	37	35	....	....	....	37	124	352	119	48	50
8....	38	37	34	....	....	....	38	103	308	98	50	55
9....	38	34	33	....	....	....	38	135	294	91	53	55
10....	38	35	33	....	....	....	38	124	265	87	58	52
11....	38	37	....	....	....	....	41	119	265	89	50	81
12....	37	35	....	....	....	....	45	145	243	91	51	128
13....	38	31	....	....	....	....	60	161	257	100	53	126
14....	37	31	....	....	....	....	85	204	286	137	50	87
15....	38	25	....	....	....	....	62	267	230	149	48	72
16....	40	32	....	....	....	....	72	336	219	114	45	74
17....	40	31	....	....	....	....	65	341	219	91	44	78
18....	41	36	....	....	....	....	74	302	227	87	42	67
19....	41	40	....	....	....	....	128	265	217	78	41	62
20....	38	38	....	....	....	....	169	248	212	81	38	59
21....	40	38	....	....	....	....	164	251	222	87	38	56
22....	40	36	....	....	....	....	159	254	232	89	38	58
23....	40	31	....	....	....	....	193	243	273	81	38	56
24....	40	32	....	....	....	....	225	227	305	72	38	56
25....	40	34	....	....	....	....	227	232	230	68	38	55
26....	39	30	....	....	....	....	232	254	206	68	39	55
27....	38	35	....	....	....	....	186	281	199	74	39	52
28....	38	35	....	....	....	....	166	313	193	78	39	50
29....	38	32	....	....	....	....	199	338	204	65	41	49
30....	38	36	Dec. 1	....	....	....	227	442	214	58	41	48
31....	38	....	to 10	....	....	....	....	406	....	54	40	....
Total	1211	1044	339	....	....	....	3149	7098	8095	3100	1395	1917
Mean..	39.1	34.8	33.9	....	....	....	105	229	270	100	45.0	63.9
Max...	43	40	36	....	....	....	232	442	383	186	58	128
Min...	37	30	31	....	....	....	32	103	193	54	38	45
Acre-ft.	2400	2070	672	....	....	....	6250	14080	16060	6150	2770	3800

Total run-off during period=54,252 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Kerber Creek at Ashley Ranch Near Villa Grove, Colo.,
For Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	8.2	7.1	.....	.....	.....	.....	.....	28	31	11	6.0	2.5
2....	7.8	5.6	.....	.....	.....	.....	.....	29	31	11	5.4	2.5
3....	7.8	4.7	.....	.....	.....	.....	.....	32	31	9.8	4.4	3.4
4....	7.1	4.7	.....	.....	.....	.....	.....	35	28	12	4.1	3.8
5....	6.8	5.0	.....	.....	.....	.....	.....	40	26	9.0	4.1	3.4
6....	6.8	5.0	.....	.....	.....	.....	.....	39	26	7.8	4.4	3.8
7....	5.6	5.0	.....	.....	.....	.....	.....	35	24	7.4	3.8	3.7
8....	6.5	4.4	.....	.....	.....	.....	.....	32	24	7.0	6.4	3.1
9....	6.5	7.0	.....	.....	.....	.....	.....	42	23	7.4	3.5	3.0
10....	6.5	6.5	.....	.....	.....	.....	.....	50	23	7.8	3.1	2.8
11....	6.2	5.0	.....	.....	.....	.....	.....	48	23	9.4	3.0	2.7
12....	6.2	4.4	.....	.....	.....	.....	.....	42	24	8.6	3.0	2.7
13....	6.2	4.4	.....	.....	.....	.....	.....	45	23	8.2	3.7	2.5
14....	5.9	3.8	.....	.....	.....	.....	Apr. 16	47	23	6.4	3.5	2.3
15....	5.9	4.0	.....	.....	.....	.....	to 30	48	22	6.0	3.2	2.4
16....	5.6	4.0	.....	.....	.....	.....	46	49	21	6.0	3.4	2.5
17....	5.3	3.6	.....	.....	.....	.....	32	49	21	5.4	3.5	2.8
18....	5.3	3.5	.....	.....	.....	.....	31	49	21	4.8	3.7	3.1
19....	5.6	3.5	.....	.....	.....	.....	28	50	20	4.4	3.0	2.7
20....	6.5	3.5	.....	.....	.....	.....	27	47	20	3.7	2.2	2.7
21....	6.8	3.5	.....	.....	.....	.....	33	42	20	3.7	2.2	2.4
22....	6.5	3.8	.....	.....	.....	.....	35	42	20	3.8	2.2	2.5
23....	7.1	4.0	.....	.....	.....	.....	30	42	18	3.8	2.4	2.5
24....	5.9	3.8	.....	.....	.....	.....	25	39	17	4.1	2.3	2.4
25....	6.8	4.0	.....	.....	.....	.....	27	38	16	5.7	2.4	2.3
26....	6.8	4.2	.....	.....	.....	.....	29	34	15	6.0	2.4	2.3
27....	5.6	4.0	.....	.....	.....	.....	30	32	15	5.7	2.7	2.5
28....	6.5	4.0	.....	.....	.....	.....	27	31	14	7.0	2.7	2.4
29....	5.6	4.2	.....	.....	.....	.....	27	35	12	9.4	3.0	2.7
30....	6.5	3.2	.....	.....	.....	.....	27	35	12	8.2	3.7	3.7
31....	7.4	.....	.....	.....	.....	.....	.....	34	.....	6.4	3.2	.....
Total	199.8	133.4	.....	.....	.....	.....	454	1240	644	216.9	106.6	84.1
Mean..	6.45	4.45	.....	.....	.....	.....	30.3	40.0	21.5	7.00	3.44	2.80
Max...	8.2	7.1	.....	.....	.....	.....	46	50	31	12	6.4	3.8
Min...	5.3	3.2	.....	.....	.....	.....	25	28	12	3.7	2.2	2.3
Acre-ft.	396	265	.....	.....	.....	.....	900	2460	1280	430	211	167

Total run-off for period=6,109 acre-feet.

**Discharge of Kerber Creek at Ashley Ranch Near Villa Grove, Colo.,
For Year Ending Sept. 30, 1938**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	3.8	3.2	.....	.....	.....	.....	2.7	76	53	21	2.4	8.3
2....	3.2	3.2	.....	.....	.....	.....	2.7	71	61	19	2.2	11
3....	3.1	3.2	.....	.....	.....	.....	2.5	74	64	19	2.2	17
4....	3.2	3.2	.....	.....	.....	.....	3.8	70	60	14	2.1	17
5....	3.1	3.0	.....	.....	.....	.....	39	66	54	14	2.4	13
6....	3.1	.....	.....	.....	.....	.....	16	59	61	11	2.1	11
7....	3.2	.....	.....	.....	.....	.....	3.8	55	60	10	2.2	13
8....	3.2	.....	.....	.....	.....	.....	3.5	57	50	10	2.4	12
9....	3.2	.....	.....	.....	.....	.....	19	55	47	9.6	2.2	9.0
10....	3.4	.....	.....	.....	.....	.....	24	59	45	7.9	2.6	8.6
11....	3.4	.....	.....	.....	.....	.....	33	58	38	7.2	3.7	10
12....	3.5	.....	.....	.....	.....	.....	50	60	40	7.2	5.8	14
13....	4.1	.....	.....	.....	.....	.....	36	61	38	8.3	6.8	14
14....	3.7	.....	.....	.....	.....	.....	22	61	34	9.6	5.4	13
15....	3.8	.....	.....	.....	.....	.....	17	69	32	7.9	5.1	13
16....	4.1	.....	.....	.....	.....	.....	17	79	30	6.5	4.8	17
17....	4.1	.....	.....	.....	.....	.....	23	64	29	5.8	4.3	16
18....	3.4	.....	.....	.....	.....	.....	54	72	28	5.4	4.0	14
19....	2.8	.....	.....	.....	.....	.....	40	52	28	4.8	3.4	13
20....	2.8	.....	.....	.....	.....	.....	30	57	26	6.1	3.4	12
21....	2.7	.....	.....	.....	.....	.....	38	60	26	5.8	3.2	11
22....	3.1	.....	.....	.....	.....	.....	57	60	28	5.8	3.2	11
23....	3.4	.....	.....	.....	.....	.....	78	52	28	6.5	3.4	10
24....	3.2	.....	.....	.....	.....	.....	81	50	23	4.3	3.2	10
25....	3.2	.....	.....	.....	.....	.....	83	54	21	4.3	2.5	9.6
26....	3.1	.....	.....	.....	.....	.....	81	58	21	5.8	2.6	9.0
27....	3.2	.....	.....	.....	.....	.....	76	68	25	8.6	2.6	8.6
28....	3.1	.....	.....	.....	.....	.....	78	86	25	8.6	4.0	8.3
29....	3.1	.....	.....	.....	.....	.....	78	83	26	4.3	4.6	7.9
30....	3.2	Nov. 1	.....	.....	.....	.....	82	49	25	2.6	5.1	7.9
31....	3.2	to 5	.....	.....	.....	.....	.....	44	.....	2.4	5.4	.....
Total	102.7	15.8	.....	.....	.....	.....	1171.0	1946	1126	263.3	109.3	349.2
Mean..	3.31	3.16	.....	.....	.....	.....	39.0	62.8	37.5	8.49	3.53	11.6
Max...	4.1	3.2	.....	.....	.....	.....	83	86	64	21	6.8	17
Min...	2.7	3.0	.....	.....	.....	.....	2.5	44	21	2.4	2.1	7.9
Acre-ft.	204	31	.....	.....	.....	.....	2320	3860	2230	522	217	693

Total run-off for period=10,977 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Crestone Creek Near Crestone, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	11	11	....	....	....	....	8	20	44	21	9.3	19
2....	11	11	....	....	....	....	8	28	45	20	8.4	17
3....	10	13	....	....	....	....	8	35	40	19	7.5	14
4....	9.1	14	....	....	....	....	8	38	35	17	6.7	13
5....	9.1	10	....	....	....	....	8	42	30	16	6.2	12
6....	8.8	9.1	....	....	....	....	10	43	28	14	5.9	11
7....	8.8	8.8	....	....	....	....	10	43	27	13	5.7	11
8....	8.8	8.8	....	....	....	....	10	46	28	12	5.2	9.1
9....	9.1	9.1	....	....	....	....	10	51	29	11	4.5	8.1
10....	9.1	8.2	....	....	....	....	10	48	30	10	4.2	7.2
11....	9.4	8.2	....	....	....	....	14	44	35	10	3.8	6.9
12....	9.4	7.9	....	....	....	....	16	50	38	9.9	3.5	6.7
13....	9.4	7.9	....	....	....	....	20	59	36	9.3	3.5	6.2
14....	9.7	7.9	....	....	....	....	20	59	34	8.7	3.1	6.4
15....	9.4	7.9	....	....	....	....	24	63	32	8.1	3.1	5.7
16....	9.7	7.6	....	....	....	....	23	64	35	6.9	3.1	5.7
17....	9.7	7.9	....	....	....	....	17	62	39	6.4	3.3	5.9
18....	9.7	7.9	....	....	....	....	20	62	38	6.2	3.6	5.7
19....	10	7.3	....	....	....	....	18	58	36	5.2	3.5	5.2
20....	11	7.3	....	....	....	....	16	53	35	4.5	3.3	5.2
21....	11	7.3	....	....	....	....	22	52	34	4.2	3.1	5.0
22....	10	7.3	....	....	....	....	22	53	34	3.6	2.8	5.0
23....	10	7.3	....	....	....	....	20	52	31	3.6	2.5	5.0
24....	10	9.1	....	....	....	....	16	45	29	3.6	2.5	4.7
25....	10	8.8	....	....	....	....	15	51	29	4.0	2.5	4.5
26....	11	9.1	....	....	....	....	22	36	30	3.8	4.0	4.3
27....	10	8.8	....	....	....	....	25	42	28	4.3	8.4	3.8
28....	10	8.5	....	....	....	....	20	39	25	6.2	11	3.8
29....	10	8.2	....	....	....	....	17	43	22	12	11	4.2
30....	11	7.6	....	....	....	....	17	50	22	13	16	6.4
31....	11	....	....	....	....	....	....	46	....	11	26	....
Total	306.2	262.8	....	....	....	....	475	1467	978	297.5	187.2	227.9
Mean..	9.88	8.76	....	....	....	....	15.8	47.3	32.6	9.60	6.04	7.60
Max..	11	14	....	....	....	....	25	64	45	21	26	19
Min..	8.8	7.3	....	....	....	....	8	20	22	3.6	2.5	3.8
Acre-ft.	607	521	....	....	....	....	942	2910	1940	590	371	452

Total run-off for period=8,333 acre-feet.

Discharge of North Crestone Creek Near Crestone, Colo., For Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.0	....	....	....	....	....	6.2	39	80	46	7.0	8.3
2....	5.8	....	....	....	....	....	6.4	25	72	40	6.6	11
3....	5.4	....	....	....	....	....	6.0	21	74	35	6.8	17
4....	5.2	....	....	....	....	....	6.0	16	78	30	6.6	21
5....	5.0	....	....	....	....	....	6.4	15	78	26	6.8	16
6....	5.0	....	....	....	....	....	6.4	14	72	25	6.4	14
7....	5.0	....	....	....	....	....	6.2	13	71	21	6.2	14
8....	5.2	....	....	....	....	....	6.2	12	68	20	6.2	16
9....	5.0	....	....	....	....	....	6.0	11	59	17	6.0	14
10....	5.0	....	....	....	....	....	6.4	11	51	16	5.8	16
11....	4.8	....	....	....	....	....	6.2	12	51	14	6.0	33
12....	5.0	....	....	....	....	....	6.6	14	56	14	6.0	71
13....	5.0	....	....	....	....	....	6.2	14	64	14	7.0	76
14....	5.0	....	....	....	....	....	6.0	26	59	16	6.8	55
15....	5.0	....	....	....	....	....	6.4	46	58	16	6.4	42
16....	5.0	....	....	....	....	....	6.4	48	58	14	6.0	39
17....	5.0	....	....	....	....	....	7.0	42	52	14	5.6	33
18....	5.0	....	....	....	....	....	11	28	46	13	5.4	28
19....	5.0	....	....	....	....	....	17	26	42	12	4.8	26
20....	5.0	....	....	....	....	....	16	26	43	13	4.4	22
21....	4.5	....	....	....	....	....	14	26	51	14	4.2	21
22....	4.5	....	....	....	....	....	17	25	55	12	4.0	18
23....	4.6	....	....	....	....	....	24	28	50	11	4.0	16
24....	4.5	....	....	....	....	....	29	42	41	11	4.0	15
25....	4.5	....	....	....	....	....	33	52	40	10	4.0	15
26....	4.5	....	....	....	....	....	29	67	51	9.5	4.0	14
27....	4.5	....	....	....	....	....	21	74	47	9.2	4.2	14
28....	4.5	....	....	....	....	....	22	84	48	9.8	4.4	13
29....	4.5	....	....	....	....	....	30	98	65	9.2	4.2	12
30....	4.5	....	....	....	....	....	42	88	56	8.5	5.2	11
31....	4.5	....	....	....	....	....	....	80	....	7.7	7.9	....
Total	152.0	....	....	....	....	....	412.0	1123	1736	527.9	172.9	721.3
Mean..	4.90	....	....	....	....	....	13.7	36.2	57.9	17.0	5.58	24.0
Max..	6.0	....	....	....	....	....	42	98	80	46	7.9	76
Min..	4.5	....	....	....	....	....	6.0	11	40	7.7	4.0	8.3
Acre-ft.	301	....	....	....	....	....	817	2230	3440	1050	343	1430

Total run-off for period=9,611 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

COLORADO RIVER BASIN

COLORADO RIVER NEAR GRAND LAKE, COLORADO

Location—Water stage recorder in Sec. 13, T. 3 N., R. 76 W., 3 miles south of Grand Lake, about 1,500 feet below highway crossing and $\frac{1}{2}$ mile above junction of Grand Lake Outlet.

Drainage Area—101 square miles.

Records Available—August, 1904, to September, 1909; October, 1910, to September 30, 1918; May 11, 1934, to September 30, 1938.

Maximum discharge observed during period 1904-09, 1910-18, 1934-38; 1,840 second feet, June 15, 16, 1918. Gage height 7.00 feet, former site and datum.

Maximum Discharge—Year 1937; 405 second feet, May 16, 1937. Gage height 3.80 feet.

Maximum Discharge—Year 1938; 776 second feet, June 22, 1938. Gage height 4.69 feet.

Accuracy—Records considered excellent except those for period of ice effect, November 3-5, November 8, 1936, to April 12, 1937, November 23-28, December 1-3, December 20, 1937, to April 9, 1938, computed on basis of four and three discharge measurements and weather records, and are good.

Diversions for irrigation above station. Grand River Trans-Mountain diversion from headwaters into Cache la Poudre River basin.

COLORADO RIVER NEAR GRANBY, COLORADO

Location—Water stage recorder in Sec. 22, T. 2 N., R. 76 W., 4 miles northeast of Granby and $1\frac{1}{2}$ miles above mouth of Willow Creek.

Drainage Area—322 square miles.

Records Available—June, 1908, to September, 1911; May 12, 1934, to September 30, 1938.

Maximum discharge observed during period 1908-11, 1934-38; 4,100 second feet, June 20, 1909. Gage height 5.50 feet (former datum).

Maximum Discharge—Year 1937; 1,590 second feet, June 26, 1937. Gage height 3.47 feet.

Maximum Discharge—Year 1938; 3,010 second feet, June 22, 1938. Gage height 4.66 feet.

Accuracy—Records considered excellent except for period of ice effect November 26, 1936, to April 19, 1937, and November 23, 1937, to April 15, 1938, which were computed on basis of five

and four discharge measurements, weather records, and records for stations near Grand Lake and Hot Sulphur Springs, and are fair.

Diversions for irrigation above station.

COLORADO RIVER NEAR HOT SULPHUR SPRINGS, COLORADO

Location—Water stage recorder in Sec. 1, T. 1 N., R. 78 W., 1 mile east of Hot Sulphur Springs at Thompson's ranch, and 3 miles above mouth of Beaver Creek.

Drainage Area—782 square miles. Altitude, 7,680 feet above mean sea level.

Records Available—July, 1904, to September, 1909; September, 1910, to September, 1924; October, 1925, to September 30, 1938. Chain gage prior to September 19, 1930, 1½ miles downstream from present site. Records comparable.

Maximum discharge observed during period 1904-09, 1910-24, 1925-38; 10,300 second feet, June 15, 1921. Gage height 8.7 feet, former site and datum.

Maximum Discharge—Year 1937; 2,540 second feet, May 17, 1937. Gage height 3.13 feet.

Maximum Discharge—Year 1938; 5,110 second feet, May 30, 1938. Gage height 4.56 feet.

Accuracy—Records considered excellent except for ice effect period November 3-13, 1936, November 30 to April 17, 1937, December 1, 1937, to April 8, 1938, which were computed on basis of four and five discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

COLORADO RIVER AT GLENWOOD SPRINGS, COLORADO

Location—Water stage recorder in Sec. 9, T. 6 S., R. 89 W., at Glenwood Springs, opposite D. & R. G. R. R. depot, ½ mile above mouth of Roaring Fork.

Drainage Area—4,560 square miles. Zero of gage is 5,720.71 feet above mean sea level.

Records Available—May 12, 1899, to September 30, 1938.

Maximum discharge observed during period 1899-1938, 30,100 second feet, June 14, 15, 1918. Gage height 12.55 feet.

Maximum Discharge—Year 1937; 11,400 second feet, May 17, 1937. Gage height 8.10 feet.

Maximum Discharge—Year 1938; 20,900 second feet, June 8, 1938. Gage height 10.36 feet.

Accuracy—Records considered good for 1937. Discharge for period of missing gage heights June 1-11, 1937, computed on basis of difference in discharge for station near Cameo, and discharge

for Roaring Fork at Glenwood Springs. Records excellent for 1938, except for period of missing gage heights January 5-8, computed on basis of weather records.

Diversion for irrigation and trans-mountain diversion above station. During low-water period flow is regulated by Shoshone Power Plant, 6 miles up stream.

COLORADO RIVER NEAR CAMEO, COLORADO

Location—Water stage recorder in Sec. 6, T. 10 S., R. 97 W., 6.7 miles northeast of Cameo and 3.4 miles above mouth of Plateau Creek.

Drainage Area—8,055 square miles.

Records Available—October, 1933, to September 30, 1938.

Maximum discharge observed during period 1933-38; 36,000 second feet, June 16, 1935. Gage height 10.91 feet.

Maximum Discharge—Year 1937; 20,200 second feet, May 18, 1937. Gage height 8.49 feet.

Maximum Discharge—Year 1938; 31,200 second feet, June 6, 1938. Gage height 10.73 feet.

Accuracy—Records considered excellent for periods of ice effect, and missing gage heights, October 1, October 26 to November 19, December 8-21, 1936, January 3 to March 3, 1937, and December 24, 1937, to February 10, March 7-12, 1938, computed on basis of combined flow of Colorado River and Roaring Fork at Glenwood Springs.

Diversions for irrigation above station.

COLORADO RIVER NEAR CISCO, UTAH

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 17, T. 23 S., R. 24 E., Salt Lake Meridian, 1 mile below mouth of Dolores River and 11 miles south of Cisco.

Drainage Area—24,100 square miles. Altitude, 4,088 feet above mean sea level.

Records Available—November, 1914, to September, 1917; October, 1922, to September 30, 1938.

Maximum discharge observed during period 1914-17, 1922-38; 76,800 second feet, June 19, 1917. Gage height 19.7 feet.

Maximum Discharge—Year 1937; 40,100 second feet, May 17, 1937. Gage height 12.00 feet.

Maximum Discharge—Year 1938; 53,700 second feet, June 5, 1938.

Accuracy—Records considered excellent except those for December 6-11, 1936, January 3, 4, March 22, 23, 25, 26, April 26, 30, May 1, 2, 4-11, and July 18, 19, 1937, computed on basis of records for other stations and discharge records.

Diversions for irrigation above station.

ARAPAHOE CREEK BELOW MONARCH LAKE, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 15, T. 2 N., R. 75 W., 700 feet below mouth of Roaring Fork and 10 miles east of Granby (revised).

Drainage Area—59 square miles. Zero of gage is 8,244.30 feet above mean sea level.

Records Available—June, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 1,380 second feet, June 22, 1938. Gage height 4.31 feet.

Maximum Discharge—Year 1937; 567 second feet, June 26, 1937. Gage height 2.53 feet.

Maximum Discharge—Year 1938; 1,380 second feet, June 22, 1938. Gage height 4.31 feet.

Accuracy—Records considered excellent, 1937, good, 1938, except for ice period November 3-13, November 23, 1936, to April 23, 1937 (computed on basis of four discharge measurements and weather records), and those for August 11 to September 30, 1937 (estimated). Those for period of ice effect November 26, 1937, to December 3, December 18 to April 9, 1938, computed on basis of three discharge measurements and weather records.

Small diversions for irrigation above station. Flow partly regulated by Monarch Lake. Several second feet diverted around station by power canal during summer.

WILLOW CREEK NEAR GRANBY, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 34, T. 3 N., R. 77 W., at highway bridge 7 miles northwest of Granby. Gold Run Creek enters 100 feet above station.

Drainage Area—105 square miles. Zero of gage is 8,240.99 feet above mean sea level.

Records Available—April, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 811 second feet, May 16, 1938. Gage height 4.49 feet.

Maximum Discharge—Year 1937; 415 second feet, May 16, 1937. Gage height 2.62 feet.

Maximum Discharge—Year 1938; 811 second feet, May 16, 1938. Gage height 4.49 feet.

Accuracy—Records considered excellent except those for ice effect period November 3, 1936, to April 25, 1937 (computed on basis of four discharge measurements and weather records), and for November 11, 1937, to April 17, 1938 (computed on basis of three discharge measurements and weather records), and are fair.

Diversions for irrigation of hay meadows above station.

FRASER RIVER ABOVE WEST PORTAL, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 15, T. 2 S., R. 75 W., 100 yards below mouth of Jim Creek and 1 mile above West Portal.

Drainage Area—22.1 square miles.

Records Available—June, 1907, to October, 1909; August, 1934, to September 30, 1937. (Discontinued.)

Maximum discharge observed during period 1934-37; 393 second feet, June 15, 1935. Gage height 2.27 feet.

Maximum Discharge—Year 1937; 125 second feet, May 22, 1937. Gage height 1.47 feet.

Accuracy—Records considered excellent for April 15 to September 30, and good for period October 1 to April 14, except for period ice effect November 3-15, 20, November 24 to April 14 computed on basis of four discharge measurements and weather records, and records for station near West Portal. Those for period of missing gage heights September 11-30 computed on basis of records for Fraser River near West Portal, and are fair.

Trans-mountain diversion by Pioneer Bore of the Moffat Tunnel above station.

Diversion began June 9, 1936. The combined flow of this diversion and Fraser River is comparable with records prior to June 9, 1936.

FRASER RIVER NEAR WEST PORTAL (ARROW)
COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 4, T. 2 S., R. 75 W., 1 $\frac{1}{2}$ miles northwest of West Portal.

Drainage Area—28 square miles. Altitude, 9,500 feet above mean sea level.

Records Available—September 23, 1910, to September 30, 1938.

Maximum discharge observed during period 1910-38; 820 second feet, June 13, 1918. Gage height 2.9 feet.

Maximum Discharge—Year 1937; 150 second feet, May 20, 1937. Gage height 1.38 feet.

Maximum Discharge—Year 1938; 152 second feet, June 9, 1938. Gage height 1.39 feet.

Accuracy—Records considered excellent except those for period ice effect, November 3, 4, 8-13, 24, November 26, 1936, to March 30, 1937, and November 8-12, 14, 23-24, 26-27, 30, December 1-2, 5-8, December 17, 1937, to March 21, 1938, March 23, 24, 31, April 3, 7-10, computed on basis of four and three discharge measurements each period, weather records, and records for adjacent stations.

Trans-mountain diversions above station. The Pioneer Bore of the Moffat Tunnel has diverted water above this station since June 9, 1936. The combined flow of this diversion and Fraser River is comparable with records prior to June 9, 1936.

VASQUEZ CREEK NEAR WEST PORTAL, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 33, T. 1 S., R. 75 W., just below main highway, 2 $\frac{1}{2}$ miles northwest of West Portal, and $\frac{1}{4}$ mile above mouth. Present gage is $\frac{3}{4}$ miles downstream from site used in 1907-9.

Drainage Area—27.8 square miles.

Records Available—June, 1907, to October, 1909; August, 1934, to September 30, 1938.

Maximum discharge observed during period 1934-38; 396 second feet, June 15, 1935. Gage height 2.64 feet.

Maximum Discharge—Year 1937; 155 second feet, May 18, 1937. Gage height 1.91 feet.

Maximum Discharge—Year 1938; 263 second feet, June 29, 1938. Gage height 2.29 feet.

Accuracy—Records considered good except those for ice effect period November 3, 1936, to April 18, 1937, and November 8, 12, 14, 23-30, December 1, December 15, 1937, to April 22, 1938, computed on basis of four discharge measurements, weather records and records for Fraser River near West Portal, and are fair. The Pioneer Bore of Moffat Tunnel started diverting water above this station May 26, 1937. Records of combined flow of this diversion and of Vazquez Creek are equivalent to records of flow of creek prior to May 26, 1937. See Correction Table published with runoff data for this station.

ST. LOUIS CREEK NEAR FRASER, COLORADO

Location—Water stage recorder in Sec. 34, T. 1 S., R. 76 W., $\frac{1}{3}$ mile below junction of East and West Branches and 4 $\frac{1}{2}$ miles southwest of Fraser. In 1907-9 site maintained 2 miles upstream. Records not comparable.

Drainage Area—32.8 square miles.

Records Available—June, 1907, to September, 1909; August, 1934, to September 30, 1938.

Maximum discharge observed during period 1934-38; 353 second feet, June 15, 1935. Gage height 2.58 feet.

Maximum Discharge—Year 1937; 214 second feet, June 25, 1937. Gage height 2.12 feet.

Maximum Discharge—Year 1938; 312 second feet, June 21, 1938. Gage height 2.54 feet.

Accuracy—Records considered good except those for periods of ice effect November 3-5, November 8, 1936, to April 22, 1937, and November 8-19, November 23, 1937, to March 20, March 22-23, 1938, computed on basis of four and three discharge measurements for each period, weather records, and are fair.

RANCH CREEK ABOVE FORKS NEAR FRASER, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 24, T. 1 S., R. 75 W., 0.8 miles above mouth of North Fork and 4 miles east of Fraser.

Drainage Area—3.8 square miles.

Records Available—April 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 67 second feet, June 21, 1938. Gage height 3.45 feet.

Maximum Discharge—Year 1937; 41 second feet, June 26, 1937. Gage height 2.06 feet.

Maximum Discharge—Year 1938; 67 second feet, June 21, 1938. Gage height 3.45 feet.

Accuracy—Records considered good except those for April 18 to May 3, 1937 (computed on basis of two discharge measurements and records for station on Ranch Creek near Fraser), and those for May 4 to June 6, 1937, which are fair.

No diversions for irrigation above station.

RANCH CREEK NEAR FRASER, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 22, T. 1 S., R. 75 W., 150 yards below junction of South Fork and Ranch Creeks and 3 miles east of Fraser at Arkall Ranch.

Drainage Area—19.9 square miles.

Records Available—August, 1934, to September 30, 1938.

Maximum discharge observed during period 1934-38; 299 second feet, June 15, 1935. Gage height 3.37 feet.

Maximum Discharge—Year 1937; 103 second feet, June 25, 1937. Gage height 2.12 feet.

Maximum Discharge—Year 1938; 266 second feet, June 21, 1938. Gage height 3.35 feet.

Accuracy—Records considered excellent in 1937 and good in 1938, except for periods of ice effect November 3-5, 8-13, November 25, 1936, to April 20, 1937 (computed on basis of four discharge measurements, gage heights and weather records), and those for September 5-30, and for period of ice effect November 8, 1937, to January 4, 1938, computed on basis of weather records and records for adjacent stations, and all are good.

No diversions above station.

RANCH CREEK NEAR TABERNASH, COLORADO

Location—Water stage recorder in Sec. 6, T. 1 S., R. 75 W., $\frac{1}{4}$ mile above mouth of Meadow Creek and $1\frac{1}{2}$ miles east of Tabernash.

Drainage Area—50.7 square miles.

Records Available—September, 1934, to September 30, 1938.

Maximum discharge observed during period 1934-38; 506 second feet, June 15, 1935. Gage height 4.40 feet.

Maximum Discharge—Year 1937; 254 second feet, May 25, 1937. Gage height 3.35 feet.

Maximum Discharge—Year 1938; 450 second feet, June 4, 1938. Gage height 4.30 feet.

Accuracy—Records considered excellent except those for periods of ice effect, November 4-7, November 9, 1936, to April 20, 1937, and November 17-19, November 23, 1937, to April 22, 1938, and period of missing gage heights April 25-27, 1938, computed on basis of four and three discharge measurements, weather records, and records for station near Fraser, and are good.

Diversions for irrigation above station.

FRASER RIVER AT GRANBY, COLORADO

Location—Water stage recorder in Sec. 1, T. 1 N., R. 76 $\frac{1}{2}$ W., 300 feet below county bridge, $\frac{1}{2}$ mile southwest of Granby. Fraser River enters Colorado River $2\frac{1}{2}$ miles downstream.

Drainage Area—285 square miles.

Records Available—September 15, 1937, to September 30, 1938.

Maximum Discharge—Year 1938; 1,080 second feet, May 30, 1938. Gage height 2.76 feet.

Accuracy—Records considered excellent except for ice effect period from November 23, 1937, to April 3, 1938, computed on basis of three discharge measurements and weather records, and by comparison with records of adjacent stations.

Diversions for irrigation above station.

NORTH FORK OF RANCH CREEK NEAR FRASER,
COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 23, T. 1 S., R. 75 W., 0.6 mile above mouth and 4 miles east of Fraser.

Drainage Area—3.4 square miles.

Records Available—April, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 62 second feet, June 21, 1938. Gage height 2.00 feet.

Maximum Discharge—Year 1937; 21 second feet, June 2, 1937. Gage height 1.63 feet.

Maximum Discharge—Year 1938; 62 second feet, June 21, 1938. Gage height 2.00 feet.

Accuracy—Records considered good above 10 second feet, and fair below.

No diversions above station.

MIDDLE FORK OF RANCH CREEK NEAR FRASER, COLORADO

Location—Water stage recorder on line between Sections 25 and 26, T. 1 S., R. 75 W., 1.6 miles above mouth of South Fork and 4.2 miles east of Fraser.

Drainage Area—4.4 square miles.

Records Available—April, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 124 second feet, June 21, 1938. Gage height 1.88 feet.

Maximum Discharge—Year 1937; 44 second feet, May 24, 1937. Gage height 1.56 feet.

Maximum Discharge—Year 1938; 124 second feet, June 21, 1938. Gage height 1.88 feet.

Accuracy—Records considered good except those for April 18 to June 22, June 25-27, 1937 (computed on basis of one discharge measurement and records for Ranch Creek near Fraser, and are fair).

No diversions above station.

SOUTH FORK OF RANCH CREEK NEAR WEST PORTAL, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 35, T. 1 S., R. 75 W., 2.8 miles above mouth and 5 miles northeast of West Portal.

Drainage Area—2.4 square miles.

Records Available—November, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 59 second feet, June 1, 1938. Gage height 1.43 feet.

Maximum Discharge—Year 1937; 26 second feet, May 15, 1937. Gage height 1.23 feet.

Maximum Discharge—Year 1938; 59 second feet, June 1, 1938. Gage height 1.43 feet.

Accuracy—Records considered good except for ice effect period, November 3-5, 23-30, 1936, which were computed on basis of record for station on Ranch Creek near Fraser, and are fair. No records December 1, 1936, to April 18, 1937, November 4, 1937, to May 23, 1938.

No diversions above station.

MEADOW CREEK NEAR TABERNASH, COLORADO

Location—Water stage recorder in Sec. 15, T. 1 N., R. 75 W., 5 miles northeast of Tabernash.

Drainage Area—7.0 square miles.

Records Available—May 27, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 197 second feet, June 3, 1938. Gage height 3.67 feet.

Maximum Discharge—Year 1937; 1.41 second feet, May 22, 1937. Gage height 3.05 feet.

Maximum Discharge—Year 1938; 197 second feet, June 3, 1938. Gage height 3.67 feet.

Accuracy—Records considered good except those for periods of ice effect, October 31, 1936, April 22 to May 2, 1937, May 5-9 (computed on basis of one discharge measurement) and November 17, 1937, to May 20, 1938 (computed on basis of four discharge measurements) weather records, and by comparison with flow of Ranch Creek near Tabernash and Arapahoe Creek near Monarch, and are fair.

No diversions above station.

STRAWBERRY CREEK NEAR GRANBY, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 32, T. 2 N., R. 75 W., 0.6 miles below Little Strawberry Creek, and 6 miles east of Granby.

Drainage Area—12.6 square miles.

Records Available—May 28, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 132 second feet May 29, 1938. Gage height 2.91 feet.

Maximum Discharge—Year 1937; 52 second feet, May 16, 1937. Gage height 1.65 feet.

Maximum Discharge—Year 1938; 132 second feet, May 29, 1938. Gage height 2.91 feet.

Accuracy—Records considered good June 10 to September 30, 1938, and all others are fair. No records December 4, 1936, to April 26, 1937.

Two diversions for irrigation above station.

WILLIAMS FORK RIVER BELOW STEELMAN CREEK,
COLORADO

Location—Water stage recorder in Sec. 20, T. 3 S., R. 76 W., just below mouth of Steelman Creek, and 7 miles southeast of Leal.

Drainage Area—16.3 square miles.

Records Available—June 23, 1933, to September 30, 1938.

Maximum discharge observed during period 1933-38; 441 second feet, June 21, 1938. Gage height 2.48 feet.

Maximum Discharge—Year 1937; 203 second feet, June 30, 1937. Gage height 1.99 feet.

Maximum Discharge—Year 1938; 441 second feet, June 21, 1938. Gage height 2.48 feet.

Accuracy—Records considered good. Discharge for periods of ice effect October 24, November 3, 1936, to May 10, 1937, and November 11-30, 1937, and May 1 to 25, 1938, computed on basis of records of station at Leal, which are good.

No diversions above station.

WILLIAMS FORK RIVER NEAR LEAL, COLORADO

Location—Water stage recorder in Sec. 31, T. 2 S., R. 77 W., just below mouth of Kinney Creek and 2 miles north of Leal.

Drainage Area—84 square miles.

Records Available—June 19, 1933, to September 30, 1938.

Maximum discharge observed during period 1933-38; 1,530 second feet, June 21, 1938. Gage height 3.49 feet.

Maximum Discharge—Year 1937; 686 second feet, June 26, 1937. Gage height 2.31 feet.

Maximum Discharge—Year 1938; 1,530 second feet, June 21, 1938. Gage height 3.81 feet.

Accuracy—Records considered excellent except those for period of ice effect, January 24 to March 18, March 24-27, 1937, and November 27 to December 5, 1937, computed on basis of discharge measurements and weather records, and are good. For periods of missing gage heights June 8-14, 1938, computed on basis of records at station below Steelman Creek and near Parshall.

Diversions for irrigation above station.

WILLIAMS FORK RIVER NEAR PARSHALL, COLORADO

Location—Water stage recorder in Sec. 1, T. 1 S., R. 79 W., just below highway bridge, $2\frac{1}{2}$ miles above mouth of Battle Creek, and four miles south of Parshall.

Drainage Area—184 square miles.

Records Available—July, 1904, to September, 1924; June 19, 1933, to September 30, 1938.

Maximum discharge observed during period 1904-24, 1933-38; 2,750 second feet, estimated, June 16, 1918.

Maximum Discharge—Year 1937; 818 second feet, June 26, 1937. Gage height 2.94 feet.

Maximum Discharge—Year 1938; 1,230 second feet, June 22, 1938. Gage height 3.77 feet.

Accuracy—Records considered good in 1937, and excellent in 1938, except those for ice effect, November 3, 1936, to April 13, 1937, and November 8, 1937, to April 28, 1938, computed on basis of four and five discharge measurements and records for station at Leal.

Diversions for irrigation above station.

BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR SITE NEAR KREMMLING, COLORADO

Location—Water stage recorder in Sec. 33, T. 1 S., R. 80 W., at Frank Stafford ranch, about 4 miles below Green Mountain Dam site, and 10 miles southeast of Kremmling.

Drainage Area—623 square miles.

Records Available—October, 1937, to September 30, 1938.

Maximum Discharge—Year 1938; 4,000 second feet, June 4, 1938. Gage height 5.93 feet.

Accuracy—Records considered excellent except for those estimated from October 1 to 21, 1937, and those during ice period November 28-29, December 3-4, December 20, 1937, to March 29, 1938, computed on basis of three discharge measurements, weather records and are good.

Diversions for irrigation above station.

BLUE RIVER AT DILLON, COLORADO

Location—Water stage recorder in Sec. 18, T. 5 S., R. 77 W., at edge of Dillon, a short distance above the mouths of Snake River and Ten Mile Creek.

Drainage Area—129 square miles. Zero of gage is 8,821.42 feet above mean sea level.

Records Available—October 15, 1910, to September 30, 1938.

Maximum discharge observed during period 1910-38; 1,180 second feet, June 2, 14, 1914. Gage height 4.35 feet.

Maximum Discharge—Year 1937; 588 second feet, June 26, 1937. Gage height 2.98 feet.

Maximum Discharge—Year 1938; 732 second feet, June 6, 1938. Gage height 3.37 feet.

Accuracy—Records considered good in 1937 and excellent in 1938, except those for periods of ice effect November 23, 1936, to April 17, 1937, and November 28, 1937, to April 5, 1938, which were computed on basis of two and three discharge measurements and weather records, and are fair.

Diversions for irrigation above station, but practically all are returned to river above station.

SNAKE RIVER AT DILLON, COLORADO

Location—Water stage recorder in Sec. 18, T. 5 S., R. 77 W., at private bridge 100 yards above mouth of river at Dillon.

Drainage Area—92 square miles. Zero of gage is 8,820.54 feet above mean sea level.

Records Available—October 15, 1910, to September 30, 1919; December, 1929, to September 30, 1938.

Maximum discharge observed during period 1910-19, 1929-38; 1,200 second feet, June 13, 1935. Gage height 4.25 feet.

Maximum Discharge—Year 1937; 556 second feet, June 25, 1937. Gage height 3.35 feet.

Maximum Discharge—Year 1938; 884 second feet, June 21, 1938. Gage height 3.92 feet.

Accuracy—Records considered good, and excellent above 125 second feet, except those for period of ice effect November 3, 1936, to February 5, 1937, February 9-12, 16, 17, 21, 25-28, 1937, and for period November 8-14, 19, 1937, November 23 to December 5, December 17, 1937, to January 14, 1938, January 20-23, February 5, 7, 13 to 20, 25-28, March 8, 11, 19-23, 27, 30, 31, April 1-3, 7-9, 1938, computed on basis of two discharge measurements, gage heights and weather records, and are fair.

One diversion for power around station.

TEN MILE CREEK AT DILLON, COLORADO

Location—Water stage recorder in Sec. 18, T. 5 S., R. 77 W., at highway bridge, 300 yards above mouth, at Dillon.

Drainage Area—113 square miles. Zero of gage is 8,819.97 feet above mean sea level.

Records Available—October 15, 1910, to September 30, 1919; April, 1930, to September 30, 1938.

Maximum discharge observed during period 1910-19, 1930-38; 2,010 second feet, June 1, 1933. Gage height 5.82 feet.

Maximum Discharge—Year 1937; 699 second feet, May 15, 1937. Gage height 4.68 feet.

Maximum Discharge—Year 1938; 1,380 second feet, June 3, 1938. Gage height 5.42 feet.

Accuracy—Records considered excellent in 1937, and good for 1938, except those for period of ice effect October 25, 1936, to April 16, 1937, and November 18, 1937 to March 26, 1938, computed on basis of three discharge measurements and weather records, and are fair.

Diversions for irrigation and mining above station. Robinson Reservoir (capacity 2,520 acre feet) constructed above station November, 1936.

ROARING FORK RIVER AT ASPEN, COLORADO

Location—Water stage recorder in Sec. 7, T. 10 S., R. 84 W., at bridge near old power plant in Aspen, $\frac{3}{4}$ mile above mouth of Hunter Creek. Prior to February 24, 1915, station located $\frac{1}{2}$ mile upstream from present site; February 24, 1915, to October 5, 1935, station $\frac{1}{4}$ mile downstream from present site. Records comparable.

Drainage Area—109 square miles.

Records Available—January 1, 1911, to September 30, 1921; April 24, 1932, to September 30, 1938.

Maximum discharge observed during period 1911-21, 1932-38; 3,170 second feet, June 18, 1917. Gage height 7.2 feet, former site and datum.

Maximum Discharge—Year 1937; 586 second feet, May 18, 1937. Gage height 3.49 feet.

Maximum Discharge—Year 1938; 1,130 second feet, June 22, 1938. Gage height 4.85 feet.

Accuracy—Records considered excellent for March 21 to September 30, 1937, and good for balance of record except for periods of ice effect, November 4, 5, November 24, 1936, to January 10, 1937, January 16 to March 20, 1937, and November 27 to December 3, December 6, 1937, December 18, 1937, to January 16, 1938, January 22-February 10, 18-20, 1938, computed on basis of three and one discharge measurements, weather records, and records for Roaring Fork at Glenwood Springs, and are fair.

Twin Lakes Trans-Mountain Tunnel diverts water 15 miles above station to Lake Creek in the Arkansas River basin. The combination of this flow and Roaring Fork is comparable with records at this station prior to May 24, 1935. See Correction Table published with discharge data for this station.

ROARING FORK RIVER AT GLENWOOD SPRINGS,
COLORADO

Location—Water stage recorder in Sec. 9, T. 6 S., R. 89 W., 1,500 feet above mouth of river at Glenwood Springs.

Drainage Area—1,460 square miles. Zero of gage is 5,720.73 feet above mean sea level.

Records Available—April, 1906, to September, 1909; September, 1910, to September 30, 1938.

Maximum discharge observed during period 1906-09, 1910-38; 17,600 second feet, June 14, 1918, and June 14, 1921.

Maximum Discharge—Year 1937; 6,800 second feet, May 18, 1937. Gage height 5.29 feet.

Maximum Discharge—Year 1938; 13,400 second feet, June 22, 1938. Gage height 7.68 feet.

Accuracy—Records considered excellent except those for periods October 1, 1936, to February 13, 1937, May 19th to June 21, 1937, October 1-31, 1937, April 1-15, 1938, and for ice period January 5 to February 13, 1937, computed on basis of discharge measurements and weather records, which are good.

Diversions for irrigation above station.

CRYSTAL RIVER NEAR REDSTONE, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 9, T. 9 S., R. 88 W., 75 feet below mouth of Nettle Creek and 7 miles below Redstone. Prior to October 1, 1935, datum 1 foot higher.

Drainage Area—197 square miles.

Records Available—May 12, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 2,980 second feet, June 15, 1935. Gage height 5.80 feet.

Maximum Discharge—Year 1937; 2,090 second feet, May 13, 1937. Gage height 4.14 feet, present datum.

Maximum Discharge—Year 1938; 4,400 second feet, June 21, 1938. Gage height 5.96 feet.

Accuracy—Records considered good except those for December 7, 1936, to March 13, 1937, and November 29 to December 4, 1937, December 19-27, 1937, January 6-7, 24-25, 1938, computed on basis of two discharge measurements, weather records and comparison of Roaring Fork at Glenwood Springs, all of which are fair.

Diversions for irrigation above station.

WILLOW CREEK NEAR RAVEN, COLORADO

Location—Water stage recorder in Sec. 13, T. 9 S., R. 91 W., 350 yards above mouth and 15 miles south of Raven.

Drainage Area—12 square miles.

Records Available—May 20, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 250 second feet, May 16, 1938. Gage height 4.44 feet.

Maximum Discharge—Year 1937; 154 second feet, May 15, 1937. Gage height 3.25 feet.

Maximum Discharge—Year 1938; 250 second feet, May 16, 1938. Gage height 4.44 feet.

Accuracy—Records considered excellent for 1937 and good for 1938, except those for May 1, July 26-28, August 2-7, 9-14, 1937, and for period of missing gage heights October 17-21, 1937, May 14-22, 1938, which were estimated and are fair.

No diversions above station.

ROAN CREEK NEAR HIGHMORE, COLORADO

Location—Water stage recorder in Sec. 26, T. 6 S., R. 100 W., at Simmons ranch, 4 miles above mouth of Carr Creek, and 4 miles west of Highmore. (Carr Creek School.)

Records Available—May 16, 1935, to September 30, 1937. (Discontinued.)

Maximum discharge observed during period 1935-37; 142 second feet, May 10, 1937. Gage height 2.54 feet.

Maximum Discharge—Year 1937; 142 second feet, May 10, 1937. Gage height 2.54 feet.

Accuracy—Records considered fair; those for October 1-31, 1936, estimated on basis of one discharge measurement. No records November 1, 1936, to March 13, 1937.

Diversions for irrigation above station.

CARR CREEK NEAR HIGHMORE, COLORADO

Location—Water stage recorder in Sec. 30, T. 5 S., R. 99 W., at Altenbern ranch, 8 miles above mouth and $7\frac{1}{2}$ miles northwest of Highmore (Carr Creek School).

Records Available—May 15, 1935, to September 30, 1937. (Discontinued.)

Maximum discharge observed during period 1935-37; 143 second feet, May 26, 1935. Gage height 1.90 feet.

Maximum Discharge—Year 1937; 140 second feet, May 10, 1937. Gage height 1.93 feet.

Accuracy—Records considered fair except those for May and June, which are poor. Discharge estimated November 18-23. No records December 2, 1936, to March 7, 1937.

Diversions for irrigation above station.

PLATEAU CREEK NEAR COLLBRAN, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 24, T. 9 S., R. 94 W., 7 miles east of Collbran.

Drainage Area—88 square miles.

Records Available—August 20, 1921, to September 30, 1938.

Maximum discharge observed during period 1921-38; 2,800 second feet, May 28, 1922. Gage height 6.72 feet, former datum.

Maximum Discharge—Year 1937; 1,370 second feet, May 17, 1937. Gage height 4.01 feet.

Maximum Discharge—Year 1938; 1,690 second feet, June 2, 1938. Gage height 4.50 feet.

Accuracy—Records considered good in 1937 and excellent in 1938 except those estimated November 4-10, 1936, March 30, 31, August 23-27, 1937, and those for ice effect period, November 25-

29, 1936, December 1 to February 21, 1937, and November 26 to December 6, December 15, 19-25, 1937, January 18 to February 14, February 18, 1938, computed on basis of one and two discharge measurements and weather records, and are fair. October 26-30, November 11-13, 1937, and May 28 to June 8, 1938, on basis of records for station near Cameo.

Five small diversions for irrigation above station.

PLATEAU CREEK NEAR CAMEO, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 18, T. 10 S., R. 97 W., 1.1 miles above mouth and 4 miles northeast of Cameo.

Drainage Area—604 square miles.

Records Available—April 26, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 2,550 second feet, May 29, 1938. Gage height 6.07 feet.

Maximum Discharge—Year 1937; 1,850 second feet, May 16, 1937. Gage height 5.08 feet.

Maximum Discharge—Year 1938; 2,550 second feet, May 29, 1938. Gage height 6.07 feet.

Accuracy—Records considered good except those for ice effect periods December 8, 1936, to March 1, 1937, and December 25, 1937, to February 10, February 19-26, 1938, computed on basis of two and one discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

BUZZARD CREEK NEAR HEIBERGER, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 11, T. 9 S., R. 93 W., 1.1 miles below Hightower ranger station and 3 miles east of Heiberger. Datum lowered one foot July 23, 1937.

Drainage Area—76.5 square miles.

Records Available—April 29, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 720 second feet, April 30, 1938. Gage height 4.45 feet.

Maximum Discharge—Year 1937; 588 second feet, May 9, 1937. Gage height 4.20 feet, present datum.

Maximum Discharge—Year 1938; 720 second feet, April 30, 1938. Gage height 4.45 feet.

Accuracy—Records considered poor except those for April 22 to July 23, 1937, and those for 1938 which are good. Those for October 1 to November 30, 1936, April 1-21, 1937, were computed on basis of two discharge measurements and records for station at Collbran. Those for August 28 to September 3, September 7, 8, and 11-14, 24, 26-30, October 1-6, November 6-7, 20-22, 27-30, 1937, were estimated.

One diversion for irrigation to West Divide Creek above station.

BUZZARD CREEK NEAR COLLBRAN, COLORADO

Location—Water stage recorder in Sec. 14, T. 9 S., R. 94 W., 7 miles east of Collbran and $\frac{1}{2}$ mile above mouth of Brush Creek.

Drainage Area—139 square miles.

Records Available—August 18, 1921, to September 30, 1938.

Maximum discharge observed during period 1921-38; 1,270 second feet, May 8, 1922. Gage height 7.80 feet.

Maximum Discharge—Year 1937; 631 second feet, May 9, 1937. Estimated from record for station at Heiberger.

Maximum Discharge—Year 1938; 877 second feet, May 16, 1938. Gage height 6.63 feet.

Accuracy—Records considered fair in 1937 and good in 1938. Those for period of ice effect November 8, 1936, to March 12, 1937, computed on basis of three discharge measurements and weather records; those for May 7-15 and June 1-5, 1937, computed on basis of records for station near Heiberger. Those estimated and for period of ice effect October 5-9, November 27, 28, December 5-6, 21-31, 1937, and from January 1 to February 18, 1938, computed on basis of two discharge measurements and weather records and are fair. From September 26-30, 1938, records were estimated due to effect of beaver dams.

Diversions for irrigation above station.

TAYLOR RIVER AT ALMONT, COLORADO

Location—Water stage recorder in Sec. 22, T. 51 N., R. 1 E., at highway bridge at Almont, 800 feet above junction with East River.

Drainage Area—440 square miles. Zero of gage is 8,011.98 feet above mean sea level.

Records Available—July 27, 1910, to September 30, 1938.

Maximum discharge observed during period 1910-38; 3,760 second feet, June 9, 1920. Gage height 5.00 feet.

Maximum Discharge—Year 1937; 1,560 second feet, May 16, 1937. Gage height 3.86 feet.

Maximum Discharge—Year 1938; 1,920 second feet, June 6, 1938. Gage height 4.16 feet.

Accuracy—Records considered good except those for period of ice effect December 1, 1936, to March 24, 1937, and December 17, 1937, to February 20, 1938, February 24-26, which were computed on basis of three discharge measurements and weather records. Taylor Park Reservoir 24 miles above station (capacity 106,000 acre feet), was completed and started storage in September, 1937.

Diversions for irrigation above station.

EAST RIVER AT ALMONT, COLORADO

Location—Water stage recorder in Sec. 22, T. 51 N., R. 1 E., 400 feet above mouth at Almont.

Drainage Area—295 square miles. Zero of gage is 8,009.51 feet above mean sea level.

Records Available—April to October, 1905; July, 1910, to April, 1922; October, 1934, to September 30, 1938.

Maximum discharge observed during period 1905, 1910-22, 1934-38; about 6,500 second feet, June 15, 1921. Gage height 6.6 feet, former site and datum.

Maximum Discharge—Year 1937; 2,190 second feet, May 18, 1937. Gage height 4.70 feet.

Maximum Discharge—Year 1938; 2,620 second feet, June 4, 1938. Gage height 4.86 feet.

Accuracy—Records considered excellent for October 1-31, 1936, March 4 to September 30, 1937, and good for November 1, 1936, to March 3, 1937. Records for 1938 are good except those for ice periods November 24-29, 1937, December 1, and Dec. 21, 1937, to February 10, 1938, which were computed on basis of two discharge measurements, gage heights and weather records. February 12-13, 1938, estimated.

Diversions for irrigation above station.

TOMICHI CREEK AT SARGENTS, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec 21, T. 48 N., R. 5 E., below old highway bridge, $\frac{3}{4}$ mile south of Sargents. Marshall Creek enters $\frac{1}{4}$ mile upstream. Station maintained from 1917-22 within a few hundred feet of present station.

Drainage Area—155 square miles.

Records Available—April 18 to September 30, 1938.

Maximum Discharge—Year 1938; 424 second feet, May 30, 1938. Gage height 2.48 feet.

Accuracy—Records considered good.

Diversions for irrigation above station.

TOMICHI CREEK AT GUNNISON, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 11, T. 49 N., R. 1 W., $\frac{1}{2}$ mile above mouth and 1 mile south of Gunnison, on road to airport.

Drainage Area—1,020 square miles.

Records Available—April 20 to September 30, 1938.

Maximum Discharge—Year 1938; 950 second feet, June 2, 1938. Gage height 2.35 feet.

Accuracy—Records considered fair.

Diversions for irrigation above station.

QUARTZ CREEK NEAR OHIO, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 27, T. 50 N., R. 3 E., 75 feet above highway bridge and 1 mile south of Ohio. Willow Creek enters $\frac{1}{2}$ mile upstream.

Drainage Area—101 square miles.

Records Available—April 29 to September 30, 1938.

Maximum Discharge—Year 1938; 572 second feet, May 30, 1938. Gage height 2.71 feet.

Accuracy—Records considered good.

Diversions for irrigation above station.

CEBOLLA CREEK AT POWDERHORN, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 29, T. 47 N., R. 2 W., 250 feet below mouth of Powderhorn Creek, $\frac{1}{3}$ mile south of Powderhorn.

Drainage Area—334 square miles.

Records Available—April 21 to September 30, 1938.

Maximum Discharge—Year 1938; 1,060 second feet, May 29, 1938. Gage height 2.40 feet.

Accuracy—Records considered good.

Diversions for irrigation above station.

HENSON CREEK AT LAKE CITY, COLORADO

Location—Water stage recorder in Sec. 33, T. 44 N., R. 4 W., 1 mile southwest of Lake City.

Drainage Area—82 square miles.

Records Available—December, 1928, to July, 1930; October, 1931, to September 30, 1937. (Discontinued.)

Maximum discharge observed during period 1918-19, 1928-30, 1931-37; 2,510 second feet, July 25, 1929.

Maximum Discharge—Year 1937; 694 second feet, May 15, 1937. Gage height 3.01 feet.

Accuracy—Records considered excellent except those for periods of ice effect November 3, 1936, November 6, 1936, to May 1, 1937, which were computed on basis of eight discharge measurements and weather records, and are fair.

No diversions above station.

LAKE FORK AT LAKE CITY, COLORADO

Location—Water stage recorder in Sec. 34, T. 44 N., R. 4 W., at Lake City just above Wade Gulch. Henson Creek enters $\frac{1}{2}$ mile downstream.

Drainage Area—123 square miles.

Records Available—April, 1918, to September, 1924; December, 1928, to July, 1930; October, 1931, to September 30, 1937. (Discontinued.)

Maximum discharge observed during period 1918-24, 1928-30, 1931-37; 1,560 second feet, June 12, 15, 1921.

Maximum Discharge—Year 1937; 764 second feet, May 18, 1937. Gage height 3.08 feet.

Accuracy—Records considered good. Those for period of ice effect November 6, 1936, to May 1, 1937, computed on basis of eight discharge measurements and weather records.

Diversions for storage and irrigation above station. Natural regulation by Lake San Cristobal, 4 miles upstream.

LAKE FORK RIVER AT GATEVIEW, COLORADO

Location—Water stage recorder in Sec. 29, T. 47 N., R. 3 W., at Carr ranch (old Gateview Post Office) $\frac{1}{4}$ mile above Indian Creek.

Drainage Area—324 square miles.

Records Available—April 24 to September 30, 1938.

Maximum Discharge—Year 1938; 2,620 second feet, June 21, 1938. Gage height 4.00 feet.

Accuracy—Records considered good. Record for period of missing gage heights August 1-24, September 18-24, computed on basis of weekly readings and records for stations on Gunnison at Iola and Cebolla Creek at Powderhorn.

Diversions for irrigation above station.

GUNNISON RIVER AT IOLA, COLORADO

Location—Water stage recorder in Sec. 28, T. 49 N., R. 2 W., 1,000 feet above highway bridge 1 mile northeast of Iola. Station maintained 1900 to 1903 at practically same site, different datum. Records comparable.

Drainage Area—2,490 square miles.

Records Available—1900-03; April 20 to September 30, 1938.

Maximum Discharge—Year 1938; 5,750 second feet, June 5, 1938. Gage height 4.37 feet.

Accuracy—Records considered good.

Diversions for irrigation above station.

EAST MUDDY CREEK NEAR BARDINE, COLORADO

Location—Water stage recorder in Sec. 17, T. 12 S., R. 89 W., $\frac{1}{4}$ mile below Spring Creek and $6\frac{1}{2}$ miles above Bardine.

Drainage Area—136 square miles.

Records Available—May 18, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 1,330 second feet, April 30, 1938. Gage height 2.88 feet.

Maximum Discharge—Year 1937; 744 second feet, May 15, 1937. Gage height 2.49 feet.

Maximum Discharge—Year 1938; 1,330 second feet, April 30, 1938. Gage height 2.88 feet.

Accuracy—Records considered excellent. Discharge for November 30, 1936, estimated, as were those for November 26-30, 1937. No records from December 1, 1936, to March 16, 1937, and December 1, 1937, to March 24, 1938.

Diversions for irrigation above station.

NORTH FORK OF GUNNISON RIVER NEAR SOMERSET, COLORADO

Location—Water stage recorder in Sec. 10, T. 13 S., R. 90 W., 2 miles east of Somerset.

Drainage Area—521 square miles.

Records Available—March 30, 1934, to September 30, 1938.

Maximum discharge observed during period 1934-38; 5,360 second feet, April 16, 1938. Gage height 5.62 feet.

Maximum Discharge—Year 1937; 4,720 second feet, May 15, 1937. Gage height 5.29 feet.

Maximum Discharge—Year 1938; 5,360 second feet, April 16, 1938. Gage height 5.62 feet.

Accuracy—Records considered excellent for 1937 and good for 1938, except for periods of ice effect December 11-15, January 2 to February 11, 1937, and December 21-22, 26, December 28, 1937, to January 2, 1938, January 8, 25-27, and February 7, which were computed on basis of one discharge measurement, gage heights and weather records, and are good.

Diversions for irrigation above station.

GUNNISON RIVER NEAR GRAND JUNCTION, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 35, T. 1 S., R. 1 W., Ute Meridian, $\frac{1}{2}$ mile below Redlands Power Diversion Dam, and two miles above mouth.

Drainage Area—8,020 square miles.

Records Available—May, 1897, to September, 1899; April, 1917, to September, 1930; January, 1934, to September 30, 1938.

Maximum discharge observed during period 1917-30, 1933-38; 35,700 second feet, May 23, 1920. Gage height 14.95 feet.

Maximum Discharge—Year 1937; 15,700 second feet, May 16, 1937. (Combined flow river and canal.)

Maximum Discharge—Year 1938; 17,600 second feet, May 31, 1938. (Combined flow river and canal.)

Accuracy—Records considered excellent above 1,000 second feet; good below, those for January 6 to March 2, 1937, computed on basis of gage heights, 2 discharge measurements and weather records.

Diversions for irrigation above station. Flows recorded are combination of river discharge and power canal diversions.

LEROUX CREEK NEAR CEDAREDDGE, COLORADO

Location—Water stage recorder in Sec. 16, T. 13 S., R. 93 W., 200 feet above headgate of Overland Ditch and 7.2 miles north-east of Cedaredge.

Drainage Area—43.0 square miles.

Records Available—October, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 1,120 second feet, May 28, 1938. Gage height 5.01 feet.

Maximum Discharge—Year 1937; 632 second feet, May 10, 1937. Gage height 5.10 feet.

Maximum Discharge—Year 1938; 1,120 second feet, May 28, 1938. Gage height 5.01 feet.

Accuracy—Records considered excellent above 50 second feet, and good below, except for periods of ice effect November 3-5, 8-12, 19-30, and November 28-30, 1937, which were computed on basis of one discharge measurement and weather records and are fair. Estimated periods April 29-30, May 1, and June 8-12, 1938, are fair.

One small diversion and several small reservoirs above station.

SURFACE CREEK AT CEDAREDDGE, COLORADO

Location—Water stage recorder in Sec. 20, T. 13 S., R. 94 W., at Cedaredge on 32-ft. weir.

Drainage Area—43 square miles.

Records Available—May 16, 1917, to September 30, 1938.

Maximum discharge observed during period 1917-38; 715 second feet, May 24, 1920. Gage height 1.95 feet.

Maximum Discharge—Year 1937; 650 second feet, May 10, 1937. Gage height 1.90 feet.

Maximum Discharge—Year 1938; 510 second feet, May 14, 1938. Gage height 1.70 feet.

Accuracy—Records considered good except those for periods of ice effect October 27, 1936, to February 28, 1937, and from December 1, 1937, to March 18, 1938, which are estimated on basis of three and two discharge measurements and weather records, and are fair.

Diversions for storage and irrigation above station. Flow regulated by numerous reservoirs. Water brought into this drainage basin from adjacent streams.

UNCOMPAHGRE RIVER AT COLONA, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 17, T. 47 N., R. 8 W., $\frac{1}{4}$ mile east of Colona at county bridge.

Drainage Area—437 square miles.

Records Available—April, 1917, to September 30, 1938, April, 1917, to November, 1934, at site 3 miles upstream. Records practically equivalent.

Maximum discharge observed during period 1917-1938; 4,080 second feet, June 13-14, 1921.

Maximum Discharge—Year 1937; 2,240 second feet, August 28, 1937. Gage height 4.50 feet.

Maximum Discharge—Year 1938; 3,390 second feet, June 22, 1938. Gage height 4.60 feet.

Accuracy—Records considered good, except those for periods of ice effect, December 3, 1936, to February 28, 1937, and December 5, 1937, to March 14, 1938, computed on basis of two discharge measurements each period, weather records, and by comparison with records for the station on North Fork Gunnison near Somerset, and are fair.

Diversions for irrigation above station.

KANNAH CREEK NEAR WHITEWATER, COLORADO

Location—Water stage recorder in Sec. 34, T. 12 S., R. 97 W., 17 miles east of Whitewater and $\frac{1}{4}$ mile below Grand Junction Water Works intake. Prior to October 14, 1935, station located 300 feet upstream.

Drainage Area—55 square miles.

Records Available—October 15, 1917, to September 30, 1921; August 17, 1922, to September 30, 1938. Flow diverted by intake not included in record since 1930. Maximum discharges only are for combined flow of stream and diversion.

Maximum discharge observed during period 1917-21, 1922-38; 1,630 second feet, June 6, 1921.

Maximum Discharge—Year 1937; 726 second feet, May 15, 1937. Gage height 2.31 feet.

Maximum Discharge—Year 1938; 984 second feet, May 28, 1938. Gage height 2.67 feet.

Accuracy—Records considered good. Periods of ice effect November 26, 1936, to March 13, 1937, computed on basis of two discharge measurements, weather records and those for period of ice effect Dec. 19, 1937, to Feb. 1, 1938, Feb. 5-14, 18-26, computed on above basis, and are fair.

Diversions for storage and domestic use above station.

DOLORES RIVER AT DOLORES, COLORADO

Location—Water stage recorder, in Sec. 9, T. 37 N., R. 15 W., in Dolores 200 feet above highway bridge and $\frac{1}{4}$ mile above Lost Canon Creek.

Drainage Area—508 square miles. Altitude, 6,954 feet above mean sea level.

Records Available—June, 1895, to October, 1903; November, 1910, to November, 1912; April, 1922, to September 30, 1938. Prior to December 6, 1912, station maintained just below mouth of Lost Canon Creek.

Maximum discharge observed during period 1895-1903, 1910-1912, 1922-1938; 10,000 second feet, October 5, 1911. Gage height 10.20 feet, former site and datum.

Maximum Discharge—Year 1937; 3,880 second feet, May 13, 1937. Gage height 6.35 feet.

Maximum Discharge—Year 1938; 5,090 second feet, April 25, 1938. Gage height, 6.85 feet.

Accuracy—Records considered excellent except those for periods of ice effect, December 3, 1936, to March 30, 1937, computed on basis of three discharge measurements and records for Animas at Durango, and are good. Records good for 1938, except those for ice effect period, November 20, 1937, to March 21, 1938, computed on basis of four discharge measurements, weather records, and comparison with Pine River near Bayfield, and are fair. Discharge estimated March 31, April 1-2.

Diversions for irrigation above station.

DOLORES RIVER AT GATEWAY, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 15, T. 51 N., R. 19 W., 0.3 miles southwest of Gateway, 0.3 miles below mouth of West Creek, and 8 miles above Colorado-Utah State Line.

Drainage Area—4,350 square miles. Zero of gage is 4,547.44 feet above mean sea level.

Records Available—March, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 13,000 second feet, April 25, 1938. Gage height 11.65 feet.

Maximum Discharge—Year 1937; 8,180 second feet, April 17, 1937. Gage height 10.28 feet, from rating curve extended above 5,000 second feet.

Maximum Discharge—Year 1938; 13,000 second feet, April 25, 1938. Gage height 11.65 feet.

Accuracy—Records considered good for March 1 to April 30, 1937, and excellent for May 1 to September 30; March 1 and 2 estimated. Records are good for 1938 except for period December 1, 1937, to June 10, 1938, which are fair.

Diversions for irrigation above and below station. Montezuma Irrigation District diverts water from basin for irrigation and storage just below station at Dolores.

Discharge of Colorado River Near Grand Lake, Colo., For Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	31	28	23	22	21	22	23	60	302	145	41	39
2....	30	27	23	22	21	22	23	57	284	156	38	39
3....	31	23	23	21	21	22	23	62	284	122	36	41
4....	32	25	23	21	21	22	23	88	274	107	35	41
5....	34	27	23	21	21	22	23	129	236	95	36	40
6....	36	26	22	21	21	22	23	133	204	90	57	43
7....	33	26	22	21	22	22	23	147	185	94	44	88
8....	32	24	22	21	21	22	22	185	177	95	36	67
9....	32	24	22	20	21	22	21	214	161	81	35	62
10....	31	24	22	21	21	22	20	256	152	85	32	52
11....	31	24	22	20	22	22	20	256	168	76	30	48
12....	30	25	22	20	22	22	19	241	211	85	27	44
13....	32	25	22	20	22	23	19	244	180	145	26	39
14....	27	26	23	20	22	23	19	291	182	161	26	41
15....	26	27	24	21	23	23	22	332	206	133	30	36
16....	26	28	23	21	22	23	30	358	206	105	34	33
17....	26	25	23	20	21	23	44	352	224	86	41	33
18....	26	24	22	20	21	23	62	315	236	90	133	31
19....	26	25	22	19	22	23	92	329	238	76	101	31
20....	30	24	22	19	21	23	90	320	218	65	75	30
21....	33	24	22	19	21	23	114	302	216	58	65	29
22....	31	24	22	18	22	23	136	276	234	55	57	30
23....	27	23	22	19	22	23	114	312	226	52	49	37
24....	26	23	22	20	22	22	88	289	185	51	46	46
25....	26	23	22	21	22	22	73	286	170	50	55	39
26....	27	23	22	20	22	22	95	264	246	45	45	36
27....	26	23	22	19	22	22	129	266	201	44	42	34
28....	27	23	22	20	22	22	112	315	156	44	39	32
29....	26	24	22	20	....	22	85	334	145	45	48	30
30....	25	24	22	21	....	23	64	326	133	44	49	30
31....	27	....	22	22	....	23	....	294	....	52	43	....
Total	903	741	692	650	604	695	1651	7633	6240	2632	1451	1221
Mean.	29.1	24.7	22.3	20.3	21.6	22.4	55.0	246	208	84.9	46.8	40.7
Max..	36	28	24	22	23	23	136	358	302	161	133	88
Min..	25	23	22	18	21	22	19	57	133	44	26	29
Acre-ft.	1790	1470	1370	1250	1200	1380	3270	15140	12380	5220	2880	2420

Total run-off for water year 1936-37=49,770 acre-feet.

Discharge of Colorado River Near Grand Lake, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	60	53	26	22	26	19	22	471	572	371	44	32
2....	62	55	24	21	27	20	22	367	590	309	43	42
3....	53	43	26	21	27	20	21	313	608	281	42	94
4....	49	42	28	22	25	20	20	241	645	253	41	66
5....	48	37	35	22	24	22	20	203	645	227	39	70
6....	42	36	26	23	24	21	22	168	676	208	37	58
7....	38	42	26	*24	24	20	22	145	626	182	35	51
8....	39	46	26	23	27	19	23	140	611	160	37	75
9....	41	50	30	24	28	18	23	126	554	148	46	57
10....	42	43	25	25	*28	18	21	138	557	138	45	54
11....	41	48	26	26	28	19	22	152	543	158	40	54
12....	36	44	29	27	26	19	24	185	557	150	39	61
13....	34	36	34	27	25	19	27	230	586	115	44	73
14....	33	42	36	28	26	19	34	320	546	113	38	66
15....	40	36	31	29	23	20	40	374	449	115	36	53
16....	52	32	25	27	24	17	40	432	415	111	34	48
17....	49	30	26	26	21	17	47	456	405	109	31	48
18....	60	38	29	27	21	17	70	411	449	117	28	48
19....	58	39	26	26	23	18	106	394	425	94	26	45
20....	44	31	21	24	21	18	119	381	449	87	27	45
21....	45	34	19	25	21	*18	160	367	525	83	28	36
22....	46	33	20	26	22	19	131	364	696	82	28	36
23....	52	24	22	26	23	20	131	320	672	71	27	35
24....	52	26	25	24	22	20	168	330	554	66	27	35
25....	52	28	26	22	20	20	227	367	492	63	28	38
26....	51	25	27	24	19	21	287	405	446	60	31	37
27....	51	24	27	26	19	21	263	478	425	61	35	38
28....	51	26	27	26	19	20	266	528	388	63	43	34
29....	51	34	25	25	....	20	333	618	388	57	39	35
30....	51	32	24	25	....	20	408	656	381	51	38	35
31....	51	....	23	24	....	20	....	575	....	47	36	....
Total	1474	1109	820	767	663	599	3119	10655	15875	4150	1112	1499
Mean.	47.5	37.0	26.5	24.7	23.7	19.3	104	344	529	134	35.9	50.0
Max..	62	55	36	29	28	22	408	656	696	371	46	94
Min..	33	24	19	21	19	17	20	126	381	47	26	32
Acre-ft.	2920	2200	1630	1520	1320	1190	6190	21130	31490	8230	2210	2970

Total run-off for water year 1937-38=83,000 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado River Near Granby, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	76	80	60	36	32	33	42	184	1290	815	275	148
2....	76	82	54	36	31	32	46	164	1280	808	242	144
3....	76	80	58	42	33	32	50	156	1330	684	229	148
4....	78	87	62	46	33	33	56	168	1310	597	208	140
5....	87	80	56	45	33	33	54	242	1060	597	188	140
6....	89	82	52	45	34	33	52	275	843	543	212	137
7....	87	80	48	40	35	33	51	340	710	615	212	188
8....	84	76	48	43	33	34	50	470	633	658	188	176
9....	84	89	46	37	32	34	49	609	609	585	168	152
10....	82	76	48	38	30	34	90	858	609	537	152	134
11....	82	76	51	37	30	34	105	902	678	508	140	125
12....	82	78	49	36	31	35	110	766	925	503	134	119
13....	82	80	47	55	33	36	110	731	941	745	131	110
14....	82	80	50	35	31	36	160	888	880	997	128	105
15....	82	82	49	36	34	36	200	1160	902	949	125	100
16....	82	84	48	36	33	36	260	1420	957	801	128	94
17....	80	82	52	35	32	36	320	1440	1110	652	144	89
18....	78	84	46	35	33	37	270	1290	1220	597	256	87
19....	78	80	46	34	34	38	285	1310	1240	520	275	82
20....	87	68	48	34	31	39	247	1250	1130	459	224	78
21....	100	78	50	33	32	40	260	1150	1150	400	196	72
22....	94	64	43	31	32	40	285	949	1390	365	180	72
23....	87	66	43	33	33	40	285	1090	1390	345	156	80
24....	82	56	42	35	33	39	252	1110	1170	320	144	94
25....	80	60	45	35	33	38	224	1200	1060	300	160	89
26....	82	59	46	34	33	38	247	1060	1490	285	144	80
27....	80	58	43	32	33	38	285	989	1360	275	134	76
28....	80	58	45	33	33	38	275	1190	1040	290	125	72
29....	78	60	39	33	....	39	247	1470	888	280	137	72
30....	76	62	40	33	....	39	204	1490	815	285	148	74
31....	78	....	37	34	....	39	....	1310	....	320	152	....
Total	2551	2227	1491	1127	910	1122	5171	27631	31410	16635	5435	3277
Mean.	82.3	74.2	48.1	36.4	32.5	36.2	172	891	1047	537	175	109
Max..	100	89	62	46	35	40	320	1490	1490	997	275	188
Min..	76	56	37	31	30	32	42	156	609	275	125	72
Acre-ft.	5060	4420	2960	2240	1800	2230	10260	54810	62300	33000	10780	6500

Total run-off for water year 1936-37=196,400 acre-feet.

Discharge of Colorado River Near Granby, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	119	156	66	50	48	35	46	1240	2080	1730	294	133
2....	137	148	54	48	48	36	50	1100	2210	1540	280	150
3....	128	137	52	50	46	36	52	992	2330	1410	271	337
4....	125	131	54	50	46	38	48	805	2520	1280	266	412
5....	119	134	62	52	44	38	45	665	2470	1200	258	374
6....	110	122	60	54	43	38	48	518	2500	1090	244	303
7....	105	140	58	54	42	38	52	440	2300	974	232	271
8....	107	128	60	*52	42	36	52	412	2210	880	232	276
9....	107	122	64	52	43	36	50	358	2010	848	244	240
10....	105	119	62	50	*44	36	50	358	2100	819	215	211
11....	100	116	68	52	44	38	50	363	2080	784	202	202
12....	97	116	72	52	44	38	58	412	2160	721	202	219
13....	94	113	78	54	42	40	68	476	2360	581	206	244
14....	92	94	78	58	42	40	74	707	2230	686	198	262
15....	107	92	78	60	40	40	90	992	1800	819	183	240
16....	122	84	64	56	42	38	136	1200	1690	735	171	215
17....	131	92	62	54	40	38	126	1460	1790	672	153	198
18....	156	94	66	54	38	40	168	1350	2000	679	143	179
19....	148	94	62	52	38	40	206	1240	1840	595	126	160
20....	131	97	54	48	40	40	202	1190	1880	542	115	150
21....	131	97	44	48	38	*40	266	1190	2320	512	112	143
22....	128	97	45	47	38	40	303	1160	2890	482	104	136
23....	131	75	50	46	38	42	440	1040	2590	440	101	129
24....	131	66	54	45	40	44	560	1030	2090	412	101	123
25....	140	68	56	45	38	44	714	1120	1990	384	112	129
26....	144	62	58	45	35	45	777	1270	1790	368	115	129
27....	148	54	56	46	35	46	735	1560	1740	358	123	118
28....	156	52	56	46	35	46	749	1810	1720	358	150	109
29....	160	54	54	45	....	46	819	2300	1760	348	150	106
30....	164	58	54	45	....	46	974	2510	1820	322	140	101
31....	160	....	52	44	....	46	....	2150	....	303	143	....
Total	3933	3012	1851	1554	1153	1244	8008	33593	63270	22872	5586	5999
Mean.	127	100	59.7	50.1	41.2	40.1	267	1084	2109	738	180	200
Max..	164	156	78	60	48	46	974	2510	2890	1730	294	412
Min..	92	52	44	44	35	35	45	353	1690	303	101	101
Acre-ft.	7800	5970	3670	3080	2290	2470	15880	66640	125500	45370	11080	11900

Total run-off for water year=301,600 acre-ft.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado River Near Hot Sulphur Springs, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	238	212	144	81	90	90	113	411	1860	1090	386	249
2....	238	212	128	81	87	90	141	381	1850	1080	348	249
3....	241	131	134	92	90	91	167	376	1890	910	334	257
4....	241	131	141	107	90	92	157	386	1890	750	308	276
5....	249	157	128	104	90	92	147	543	1660	741	288	264
6....	260	166	122	104	92	92	131	622	1360	686	304	257
7....	241	157	113	91	95	93	125	733	1200	775	308	288
8....	245	147	110	98	92	93	125	930	1080	863	284	292
9....	245	147	104	84	87	94	122	1200	970	758	268	264
10....	249	134	116	87	81	94	208	1560	980	686	253	245
11....	264	150	119	83	84	96	230	1630	990	642	238	230
12....	260	154	113	82	90	98	241	1440	1250	615	230	216
13....	234	160	110	82	95	98	249	1400	1290	890	230	208
14....	212	157	113	82	84	98	362	1630	1200	1280	241	201
15....	212	167	113	84	98	100	449	2000	1220	1250	253	198
16....	205	180	110	82	92	100	524	2380	1240	1020	257	191
17....	208	150	119	81	90	100	716	2420	1390	818	288	187
18....	205	187	107	81	92	100	642	2200	1510	766	395	194
19....	198	163	104	79	95	105	649	2170	1540	664	427	180
20....	212	154	107	80	87	105	549	2080	1420	574	352	174
21....	230	177	113	77	87	105	537	2000	1400	500	312	167
22....	238	141	98	77	90	105	716	1680	1610	454	288	163
23....	230	163	98	82	92	103	701	1860	1660	422	272	184
24....	212	138	95	79	90	103	506	1770	1420	400	257	201
25....	230	163	104	80	92	103	416	1950	1200	395	280	198
26....	234	147	107	79	91	102	500	1800	2060	376	264	180
27....	230	147	101	80	92	102	615	1600	1770	386	245	174
28....	249	150	104	84	92	102	601	1760	1400	390	241	167
29....	241	157	87	87	....	102	524	2040	1130	376	253	163
30....	216	160	90	87	....	105	449	2170	1060	386	288	167
31....	223	....	87	95	....	107	....	1980	....	443	264	....
Total	7190	4759	3439	2652	2527	3060	11612	47102	42600	21386	8956	6384
Mean.	232	159	111	85.5	90.2	98.7	387	1520	1420	690	289	213
Max..	264	212	144	107	98	107	716	2420	2060	1280	427	292
Min...	198	131	87	77	81	90	113	376	970	376	250	163
Ac.-ft.	14260	9440	6820	5260	5010	6070	23030	93430	84500	42420	17760	12660

Total run-off for water year 1936-37=320,700 acre-feet.

Discharge of Colorado River Near Hot Sulphur Springs, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	281	256	220	130	110	115	300	2450	3960	2570	425	280
2....	304	244	180	120	110	115	280	2050	4060	2250	415	288
3....	260	237	170	120	105	110	290	1910	4230	2050	405	700
4....	245	234	170	120	105	110	360	1580	4570	1880	395	690
5....	222	219	180	120	105	110	290	1340	4480	1780	380	640
6....	212	201	170	120	105	110	275	1180	4460	1610	370	570
7....	201	249	170	120	105	100	250	1020	4140	1430	350	500
8....	208	219	175	*123	105	100	245	920	3810	1280	365	520
9....	222	194	175	120	*108	100	253	846	3450	1170	395	480
10....	208	230	170	120	105	105	256	864	3600	1090	370	450
11....	201	222	180	115	110	105	256	882	3490	1060	341	400
12....	197	219	190	*112	110	105	327	970	3490	1000	336	440
13....	197	230	200	115	110	110	390	1170	3850	846	341	490
14....	187	180	200	130	110	120	440	1760	3720	940	332	470
15....	215	215	200	145	105	130	360	2350	3000	1110	313	430
16....	245	183	190	140	105	130	375	3020	2740	1060	296	400
17....	253	190	175	130	100	130	415	3270	2820	960	280	375
18....	304	201	180	125	95	130	577	3090	3110	1000	260	350
19....	272	197	180	125	95	140	765	2890	2820	855	237	332
20....	241	215	180	125	95	170	612	2840	2810	774	226	313
21....	256	219	140	130	92	190	598	2670	3400	729	215	300
22....	249	215	115	115	92	185	873	2640	4550	696	208	296
23....	245	156	115	115	95	*192	1280	2390	4370	626	208	288
24....	245	197	125	110	95	200	1450	2260	3450	584	204	268
25....	253	234	140	110	98	220	1680	2350	3360	558	253	256
26....	256	166	145	110	98	220	1910	2570	3000	534	268	253
27....	253	163	145	110	100	230	1630	3090	2820	522	256	241
28....	256	183	140	110	105	230	1510	3560	2820	528	264	230
29....	260	201	140	110	....	240	1760	4350	2790	522	288	219
30....	256	194	135	110	....	250	1950	4890	2910	480	296	215
31....	256	....	130	110	....	260	....	4240	....	445	309	....
Total	7463	6268	5125	3715	2873	4762	21897	71412	106080	32939	9601	11684
Mean.	241	209	165	120	103	154	730	2304	3536	1063	310	389
Max..	304	256	220	145	110	260	1950	4890	4570	2570	425	700
Min...	187	156	115	110	92	100	245	846	2740	445	204	215
Ac.-ft.	14800	12430	10170	7370	5700	9450	43430	141600	210400	65330	19040	23170

Total run-off for water year 1937-38=562,900 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado River at Glenwood Springs, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1170	996	634	706	612	726	909	2040	9000	4080	1800	1310
2....	1140	1140	612	652	537	732	640	1920	8600	4060	1740	1300
3....	1240	1070	548	537	558	787	815	2030	8150	3910	1590	1240
4....	1190	961	732	456	590	706	772	2120	7600	3560	1490	1320
5....	1110	853	664	574	585	700	1020	2920	6400	3280	1440	1330
6....	1090	1050	590	634	652	726	794	3600	5800	3120	1350	1330
7....	1120	1220	658	676	682	418	845	4120	5350	2940	1580	1420
8....	1140	909	602	706	713	670	758	4380	5150	2920	1360	1370
9....	1110	1190	580	569	537	794	732	4990	5000	3080	1270	1400
10....	1190	952	629	471	580	861	794	6000	4980	3180	1210	1340
11....	1130	726	634	517	634	837	830	6640	4850	2940	1270	1320
12....	1020	877	618	527	607	877	970	6500	4720	3220	1090	1310
13....	1070	935	456	501	682	885	1010	6330	5150	3150	987	1080
14....	845	935	607	522	706	909	1110	6900	5040	3750	970	1010
15....	1090	917	506	618	694	869	1240	8030	4880	4310	970	1050
16....	1090	979	607	558	694	885	2150	9300	4910	3930	970	979
17....	987	935	765	569	746	935	2840	10200	5230	3330	1080	917
18....	1030	987	758	461	752	893	2760	10300	5750	3010	1220	996
19....	987	987	801	596	746	869	2040	10100	5940	2890	1190	893
20....	909	943	640	634	612	808	1980	9610	5640	2650	1420	901
21....	1000	853	713	607	461	815	2210	9340	5450	2410	1410	853
22....	1030	837	700	569	732	1110	2270	9270	5610	2130	1290	917
23....	1070	901	694	456	732	765	2770	9210	5910	1960	1030	885
24....	1140	845	558	532	739	720	2870	9150	5660	1810	1020	917
25....	837	664	569	548	746	801	2270	8660	5040	1720	979	885
26....	1060	585	758	522	652	885	2000	8540	5230	1730	970	1100
27....	1030	779	869	537	732	618	2090	8240	6750	1720	1000	901
28....	1020	706	752	569	580	624	2600	8150	5890	1700	1060	901
29....	1030	658	706	585	....	713	2670	8510	4780	1730	1190	935
30....	996	624	682	580	....	670	2360	9340	4310	1740	1110	901
31....	979	....	522	580	....	652	....	9710	....	1720	1220	....
Total	32850	27014	20164	17569	18293	24260	49119	216450	172770	87680	38276	33011
Mean...	1060	900	650	567	653	783	1637	6982	5759	2828	1235	1100
Max...	1240	1220	869	706	752	1110	2870	10300	9000	4310	1800	1420
Min...	837	585	456	456	461	418	640	1920	4310	1700	970	853
Acre-ft. 65160	53580	39990	34850	36280	48120	97430	429300	342700	173900	75920	65480	

Total run-off for water year 1936-37=1,463,000 acre-feet.

Discharge of Colorado River at Glenwood Springs, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	869	1190	787	952	598	772	535	8750	17200	11100	2280	1920
2....	926	1190	688	558	676	1060	943	8990	16900	9710	2160	2020
3....	1190	1180	658	628	688	1150	628	7880	17600	8810	2130	2070
4....	1140	1170	720	670	640	1530	909	7160	19000	8150	2060	2460
5....	1120	1150	688	620	604	1000	952	6190	19700	7540	2000	2650
6....	877	1050	808	570	592	901	1200	5370	20400	7040	1920	2500
7....	1080	706	765	540	652	893	1540	4520	19600	6330	1850	2280
8....	926	1240	787	490	713	845	1240	4060	18000	5800	1890	2310
9....	917	1160	765	504	713	830	1000	3790	16600	5390	1900	2390
10....	917	1150	726	652	765	853	952	3600	16200	5040	2000	2280
11....	935	979	752	628	752	869	1180	3690	16100	4750	2040	2090
12....	926	1140	801	658	877	979	1230	3910	15400	4500	1960	2040
13....	869	1090	861	628	779	1180	1270	4480	16300	4400	1930	2250
14....	869	979	1100	1050	752	1280	1810	5860	16400	4340	1880	2360
15....	970	837	787	610	752	1670	2280	8030	14500	4380	1900	2210
16....	1170	1040	787	694	732	1250	2030	10400	13100	4550	1760	2040
17....	1180	1030	688	739	720	1080	1950	11600	12500	4380	1650	1900
18....	1230	1040	801	726	640	1120	2190	11800	12900	4120	1530	1810
19....	1290	1020	604	713	586	1260	2700	11500	12700	4010	1470	1680
20....	1300	861	524	670	713	1290	3540	11000	11600	3770	1400	1590
21....	1290	739	493	646	726	1290	3030	10500	12100	3480	1250	1500
22....	1270	1190	412	670	720	1570	3040	10200	14500	3350	1310	1490
23....	1240	1050	504	622	720	1250	3640	9930	15900	3150	1280	1460
24....	1229	935	610	640	713	1070	4930	8930	15200	2960	1230	1460
25....	1120	837	652	569	720	1270	5830	8630	13200	2820	1190	1460
26....	1210	765	646	604	720	1270	6780	9040	12100	2700	1220	1460
27....	1190	823	628	580	732	1220	7240	10200	11400	2670	1260	1370
28....	1170	444	664	563	746	1600	6310	12160	11300	2700	1770	1380
29....	1180	845	569	558	....	913	6450	14800	11400	2670	2060	1330
30....	1010	787	524	676	....	1040	7360	17100	11600	2590	1590	1260
31....	1190	....	580	580	....	885	....	17600	....	2390	1580	....
Total	33791	29617	21379	20098	19741	34276	84689	271660	451440	149590	53450	57030
Mean...	1090	987	690	645	705	1106	2823	8763	15050	4825	1724	1901
Max...	1300	1240	1100	1050	877	1670	7360	17600	20400	11100	2280	2650
Min...	869	444	412	490	586	772	535	3600	11300	2390	1190	1260
Acre-ft. 67020	58740	42400	39690	39160	67990	168000	538800	895300	296700	106000	113100	

Total run-off for water year 1937-38=2,433,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado River Near Cameo, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1730	1600	1180	1200	1150	1200	1270	3530	15000	7400	2800	2270
2....	1800	1650	1250	1390	1150	1400	1460	3210	13000	7050	2800	2320
3....	1840	1750	1200	1250	1050	1400	1310	3280	12500	6650	2630	2200
4....	1900	1650	1120	1000	1100	1450	1500	3800	12400	6380	2480	2200
5....	1920	1500	1300	960	1150	1350	1400	5110	11700	5840	2320	2240
6....	1920	1500	1270	1100	1200	1350	1550	6400	10600	5650	2380	2210
7....	1940	1650	1160	1200	1300	1350	1450	7380	9270	5180	2450	2210
8....	1940	1350	1200	1300	1300	1300	1420	8210	8320	5070	2420	2270
9....	1940	1350	1150	1300	1300	1350	1340	9240	7750	5770	2140	2200
10....	1950	1300	1150	1150	1100	1500	1360	11100	7620	5430	1970	2170
11....	1940	1600	1200	1100	1150	1600	1460	12600	7550	5130	1870	2070
12....	1920	1450	1250	1050	1200	1600	1630	12400	8320	5480	1770	1970
13....	1670	1450	1200	1050	1200	1650	1730	12000	9160	6130	1680	1950
14....	1720	1400	1000	1050	1300	1740	1830	13200	9100	6450	1570	1790
15....	1630	1550	1200	1100	1400	1690	2070	14800	8850	6880	1480	1740
16....	1330	1550	1150	1150	1350	1680	2590	17400	8710	6800	2180	1750
17....	1620	1600	1300	1150	1350	1780	3500	18300	9410	5770	1860	1750
18....	1670	1550	1400	1150	1400	1690	4040	19400	10300	5430	1860	1730
19....	1700	1600	1400	1050	1400	1680	3610	19100	10700	5020	2070	1720
20....	1800	1610	1400	1150	1450	1520	3200	17600	10400	4730	2000	1700
21....	2000	1420	1250	1300	1300	1390	3260	16500	10200	3980	2150	1700
22....	1950	1540	1430	1200	1050	1450	3580	15500	10400	3580	2030	1700
23....	1920	1440	1320	1150	1440	1740	3910	15400	10600	3260	1920	1840
24....	1740	1370	1230	1000	1350	1400	4280	14700	10300	3030	1740	1830
25....	1780	1400	1120	1100	1350	1330	3980	13700	9350	2800	1730	1840
26....	1550	1280	1150	1100	1400	1450	3410	12800	8930	2790	1670	1840
27....	1700	1190	1390	1050	1300	1550	3360	11900	10000	2700	1680	1830
28....	1650	1360	1380	1100	1350	1270	3750	12000	9850	2880	1730	1830
29....	1650	1260	1310	1150	....	1190	4080	12900	8580	2800	2030	1840
30....	1600	1240	1230	1300	....	1260	3870	15200	8000	3060	2200	1870
31....	1600	....	1240	1200	....	1330	....	16500	....	3230	2200	....
Total	55020	45360	38530	35500	35500	45390	77210	375160	296870	152350	63810	58580
Mean.	1775	1512	1243	1145	1268	1464	2574	12100	9896	4915	2058	1953
Max.	2000	1850	1430	1390	1450	1780	4280	19400	15000	7400	2800	2320
Min.	1330	1190	1000	960	1050	1200	1270	3210	8000	2700	1480	1700
Ac.-ft.	109100	89970	76420	70410	70410	90030	153100	744100	588800	302200	126600	116200

Total run-off for water year 1936-37=2,537,000 acre-feet.

Discharge of Colorado River Near Cameo, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1670	1860	1510	1400	1200	1600	1420	15100	26300	19200	3890	2880
2....	1790	1870	1450	1420	1220	1730	1250	15400	26100	17300	3650	3370
3....	1880	1840	1430	1320	1260	3110	1460	13400	26600	15700	3520	3990
4....	2050	1840	1510	1250	1240	3910	1280	11600	28400	14400	3400	4310
5....	2000	1840	1480	1120	1220	3970	1520	10300	29600	13300	3250	4030
6....	1930	1820	1460	1130	1200	1720	1740	9160	30400	11800	3090	3830
7....	1790	1940	1540	1120	1180	1320	1950	7950	30500	10800	3020	3610
8....	1930	1950	1540	1160	1220	1300	2000	7100	28000	9910	3050	3570
9....	1790	1970	1540	1220	1300	1350	1740	6510	26000	9100	3060	3680
10....	1780	1860	1490	1330	1400	1420	1640	6160	25500	8640	3170	3650
11....	1790	1820	1550	1320	1620	1500	1660	6040	25500	8210	3110	3450
12....	1800	1780	1620	1310	1820	1680	1840	6370	24600	7920	3030	3700
13....	1780	1830	1940	1300	1790	1870	1980	7140	25500	7950	3160	3970
14....	1750	1780	1740	1300	1340	2010	2370	8960	27100	7950	3240	3830
15....	2920	1580	1830	1350	1300	2070	3000	12100	24000	7740	3220	3680
16....	2440	1690	1570	1550	1330	2250	3140	16400	22000	7640	3060	3400
17....	2220	1720	1610	1480	1250	1830	3060	18800	21200	7460	2860	3190
18....	2400	1720	1540	1400	1230	1730	3140	18800	22000	7050	2670	3030
19....	2260	1680	1610	1350	1110	1730	4010	18400	22200	6700	2540	2860
20....	2160	1740	1330	1320	1080	1820	5410	17700	20900	6440	2370	2720
21....	2140	1680	1340	1300	1240	1940	5780	16700	21200	5990	2280	2660
22....	2090	1630	1170	1250	1230	2010	5620	15900	25900	5700	2190	2550
23....	2020	1970	1430	1240	1230	2070	6460	15300	27000	5390	2110	2480
24....	2010	1770	1490	1220	1220	1790	7900	14300	25500	5110	2020	2460
25....	1980	1680	1500	1200	1190	1660	9760	13800	23300	4830	1980	2390
26....	1900	1570	1470	1200	1170	1620	11300	14600	21400	4610	1930	2330
27....	1970	1630	1400	1200	1200	1840	11800	16500	20400	4570	1950	2290
28....	1900	1500	1360	1200	1340	1790	11100	19600	19800	4590	2080	2190
29....	1900	1230	1300	1220	....	1640	11000	23500	19900	4550	2250	2120
30....	1820	1580	1300	1300	....	1580	12500	26300	20400	4430	2370	2050
31....	1820	....	1290	1310	....	1560	....	26800	....	4170	2360	....
Total	61680	52370	46340	39820	36130	59420	138840	436690	737200	259150	85880	94270
Mean.	1990	1746	1495	1285	1290	1917	4628	14090	24570	8360	2770	3142
Max.	2920	1970	1940	1550	1820	3970	12500	26800	30500	19200	3890	4310
Min.	1670	1230	1170	1120	1080	1300	1250	6040	19800	4170	1930	2050
Ac.-ft.	122300	103900	91910	78980	71660	117900	275400	866200	1462000	514000	170300	187000

Total run-off for water year 1937-38=4,062,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado River Near Cisco, Utah, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2150	3030	2340	2200	....	3400	2500	13500	26200	9960	3680	3580
2....	2340	3120	2300	2340	....	3400	2500	12000	22500	9360	3210	5320
3....	2420	3260	2350	2000	....	3210	2760	12900	20500	9070	3030	3680
4....	2420	3300	2270	1600	....	3400	2940	15500	20100	8780	2760	3400
5....	2500	3120	2230	1300	*1680	3210	3400	17500	19300	7690	2500	3210
6....	2420	2760	2400	*1210	....	3210	3030	20000	17300	7180	2270	3120
7....	2420	2940	2350	1300	....	3120	3120	21500	15400	6930	2590	3120
8....	2500	3210	2250	1300	....	3030	3300	23000	13300	6450	2940	2940
9....	2500	3300	2300	1300	....	2940	3030	24500	11900	8220	2760	2940
10....	2500	3120	2250	1300	....	2940	2850	27500	11200	7950	2300	2850
11....	2120	3030	2250	1300	*2720	3120	3400	30000	10900	7690	1960	2500
12....	2500	2940	2200	1300	*1840	3120	4370	33900	10900	10300	1780	2320
13....	2400	2760	2150	1300	....	3210	6340	31300	12600	12900	1670	2230
14....	2280	2850	2140	1300	....	3580	7420	31300	14300	9960	1460	2220
15....	2300	2940	2200	1300	....	3580	9360	33000	13300	9660	1280	1870
16....	2300	3030	2220	1300	....	3400	12900	35700	12600	9360	1190	1700
17....	2230	2940	2500	1300	....	3490	16200	39200	12200	8500	1540	1650
18....	2270	3030	2940	1300	....	3680	17700	38200	13300	7700	2070	1610
19....	2300	3030	3120	1300	....	3680	15800	38200	14300	6900	1800	1560
20....	2760	2940	2940	1300	....	3680	15400	35700	15100	6100	1720	1580
21....	3300	2940	2590	1300	....	3300	15400	30900	14300	5320	1700	1480
22....	2850	2850	2390	1300	....	3250	16600	28300	14300	4470	1740	1390
23....	2760	2760	2390	1300	*2240	3300	18900	27100	14700	3870	1590	1700
24....	2680	2760	2500	1300	....	3120	17700	27100	14700	3400	1510	2140
25....	2680	2760	2500	1300	....	3050	14300	25000	13600	3030	1390	1900
26....	2760	2590	2140	1300	*3250	3000	12900	22100	12200	2760	1230	1860
27....	2680	2400	2500	1300	....	2940	12900	19700	12200	2590	1180	1840
28....	2590	2340	2590	1300	....	3030	15400	18100	13600	2500	1170	2030
29....	2590	2500	2590	1300	....	2590	14700	22900	12600	3030	1920	1960
30....	2850	2400	2680	1300	....	2400	15000	21700	10900	3300	5210	2010
31....	3300	....	2320	1300	....	2590	....	27500	....	3580	4580	....
Total	78970	86990	74890	43150	61600	88970	292130	805000	440300	208510	67730	71710
Mean.	2547	2900	2416	1392	2200	3193	9738	25970	14680	6726	2185	2390
Max.	3300	3300	3120	2340	....	3680	18900	39200	26200	12900	5210	5320
Min.	2150	2340	2140	....	....	2400	2500	12000	10900	2500	1170	1390
Ac.-ft.	156600	172500	148500	85590	122200	196300	579400	1597000	873300	413600	134300	142200

Total run-off for water year 1936-37=4,621,490 acre-feet.

*Discharge measurement.

Discharge of Colorado River Near Cisco, Utah, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2200	2940	2680	2070	2500	3210	3580	37000	49100	31300	4780	3680
2....	2500	2940	2590	2250	2500	3780	3210	39200	48200	27500	4470	4470
3....	2500	2940	2500	2280	2500	5210	2760	31300	46800	24100	4070	8620
4....	2500	2940	2590	2590	2680	8780	2850	25400	48600	22100	3780	11000
5....	2680	3030	2850	2680	2680	7180	3030	21700	51900	20100	3680	8780
6....	2680	3030	2850	2590	2500	4780	4170	18900	52800	18500	3490	7180
7....	2500	3210	2850	2590	2280	3490	5100	17200	52300	16600	3400	6690
8....	2320	4170	2760	2550	2170	3210	4780	15100	50000	15100	3400	6930
9....	2390	3120	2850	2500	2170	3030	4270	13600	45000	13300	4070	6930
10....	2270	3120	2850	2450	2320	2940	3970	12600	41400	12200	4890	6690
11....	2200	3210	2760	2420	2760	3030	4780	12200	40500	11600	3970	6690
12....	2170	3210	3030	2420	3210	3120	7180	12900	38800	10900	3870	8780
13....	2150	3030	4070	2390	3490	3300	9660	15100	37400	10300	3780	9360
14....	2140	3120	4370	2500	3400	3680	10300	18500	42800	10300	4470	7430
15....	3970	3030	3490	2500	2850	4370	10900	25400	43200	10900	4780	6930
16....	5000	2850	3300	2590	2680	4470	9660	33500	37000	10300	4470	6690
17....	4170	2850	3120	2680	2590	4170	10300	38800	34400	9960	3970	6100
18....	3780	3030	3030	2760	2420	3780	12900	39600	33000	9660	3490	5880
19....	3780	3030	2850	2760	2280	3680	16600	36600	33900	9070	3210	5430
20....	3580	3030	2850	2760	2250	3580	21300	34400	32600	8780	2760	5100
21....	3490	3030	2750	2590	2280	3680	23700	32200	30900	7950	2500	4680
22....	3400	2850	2400	2590	2390	4070	25400	29600	35700	7430	2320	4580
23....	3300	3030	1800	2500	2400	4580	27500	28800	41100	6930	2140	4270
24....	3210	3400	1900	2280	2500	4170	30000	26600	43200	6450	1990	4170
25....	3210	3120	2150	1880	2340	3680	34400	25400	39600	6100	1860	4170
26....	3210	3030	2370	1930	2200	3870	37400	26200	35200	5990	1870	3780
27....	3120	2850	2500	2010	2150	4370	37000	29200	33000	5990	1840	3680
28....	3120	2760	2420	2200	2230	4680	31300	33900	30500	5320	1870	3490
29....	3120	2680	2420	2170	....	4580	31300	41000	29600	5320	1990	3300
30....	3030	2590	2250	2340	....	4270	33500	48200	30500	5540	2150	3120
31....	3120	....	2170	2500	....	3870	....	51400	....	5210	2760	....
Total	92810	91170	85370	75320	70720	128610	462800	8716000	1212000	370800	102090	178600
Mean.	2994	3039	2574	2420	2526	4119	15430	28120	40400	11960	3293	5953
Max.	5000	4170	4370	2760	3490	8780	37400	51400	52800	31300	4890	11000
Min.	2140	2590	1800	1880	2150	2940	2760	12200	29600	5210	1840	3120
Ac.-ft.	184100	180800	169300	149400	140300	255100	918000	1729000	2404000	735500	202500	354200

Total run-off for water year 1937-38=7,422,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arapaho Creek Below Monarch Lake, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	9.0	16	....	....	....	....	5	45	466	300	67	52
2....	11	18	....	....	....	....	5	33	441	279	58	50
3....	13	16	....	....	....	....	5	30	361	205	58	46
4....	15	19	....	....	....	....	5	26	339	198	67	39
5....	16	17	....	....	....	....	5	36	273	201	69	36
6....	18	16	....	....	....	....	5	63	228	184	65	36
7....	17	16	....	*7.7	....	....	5	112	201	232	63	40
8....	16	16	....	....	....	....	5	168	177	218	63	38
9....	15	17	....	....	....	....	5	222	171	184	61	34
10....	15	17	....	....	....	....	5	342	181	164	59	34
11....	15	16	....	....	....	....	5	279	228	136	44	30
12....	15	15	....	....	....	....	5	228	300	142	42	26
13....	16	15	....	....	....	....	5	218	300	232	38	23
14....	20	14	....	....	....	....	5	279	296	307	31	21
15....	20	14	....	....	....	....	6	365	293	279	31	21
16....	19	13	....	....	....	....	10	437	332	235	45	18
17....	19	13	....	....	....	....	15	420	388	188	48	17
18....	19	13	....	....	*4.5	....	25	400	392	174	56	16
19....	18	13	....	....	....	....	48	416	380	155	52	15
20....	20	14	....	....	....	....	52	396	350	134	50	14
21....	19	14	....	....	....	*4.5	60	380	384	114	48	13
22....	18	14	....	....	....	....	68	342	497	106	45	12
23....	18	13	....	....	....	....	62	346	416	96	39	13
24....	17	13	....	....	....	....	58	350	361	87	36	14
25....	17	12	....	....	....	....	45	369	346	85	34	12
26....	16	12	....	....	....	....	46	332	501	78	31	10
27....	15	12	....	....	....	....	52	339	408	76	30	10
28....	15	12	....	....	....	....	65	408	346	82	29	11
29....	16	12	....	....	....	....	65	488	310	76	32	11
30....	16	11	....	....	....	....	52	484	296	74	42	13
31....	16	....	....	....	....	....	....	474	....	71	54	....
Total	509.0	433	272.8	198.4	126	142.6	799	8832	9962	5092	1487	725
Mean.	16.4	14.4	8.8	6.4	4.5	4.6	26.6	285	332	164	48.0	24.2
Max..	20	19	....	....	....	....	68	488	501	307	69	52
Min..	9.0	11	....	....	....	....	5	26	171	71	29	10
Acre-ft.	1010	859	541	394	250	283	1580	17520	19760	10100	2950	1440

Total run-off for water year 1936-37=56,690 acre-feet.

*Discharge measurement.

Discharge of Arapaho Creek Below Monarch Lake, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	20	40	15	15	11	9	8	249	651	598	155	39
2....	25	36	14	14	10	9	8	222	743	523	152	50
3....	29	33	14	14	10	9	8	194	840	488	148	168
4....	29	36	13	14	10	9	8	158	937	428	142	201
5....	30	52	13	14	10	9	8	131	726	400	139	152
6....	28	39	9.6	14	10	9	8	112	721	365	131	104
7....	25	34	10	*15	10	9	7	92	638	335	120	82
8....	25	32	16	14	10	9	7	80	611	321	112	71
9....	26	30	13	14	10	9	7	76	572	321	89	59
10....	24	28	9.6	14	*10	9	6.6	74	668	307	40	52
11....	25	25	9.6	14	10	9	8.1	76	638	293	50	52
12....	25	24	8.7	14	9	9	8.7	87	629	235	59	58
13....	24	16	9.6	14	9	9	8.7	104	726	184	67	76
14....	23	9.6	10	15	9	9	9.0	168	651	286	71	76
15....	25	8.7	11	16	9	9	11	242	541	307	71	65
16....	29	8.7	11	15	9	9	13	324	536	266	63	56
17....	31	11	12	14	9	9	16	346	629	256	56	46
18....	28	13	12	14	9	9	18	314	690	242	46	42
19....	31	15	13	13	9	9	24	296	576	218	40	36
20....	32	16	13	13	8	9	39	293	629	215	38	32
21....	31	17	13	13	8	*9	40	283	827	198	36	33
22....	30	21	13	13	8	10	45	269	1070	184	34	31
23....	29	19	13	12	8	10	56	239	818	194	33	26
24....	31	18	14	12	8	10	65	242	686	201	33	25
25....	33	16	15	12	9	10	78	273	704	184	34	24
26....	39	14	15	12	9	10	112	335	611	177	34	22
27....	39	12	15	12	9	10	120	428	646	171	34	22
28....	42	13	15	11	9	11	112	567	620	161	34	22
29....	42	14	15	11	....	11	117	809	638	161	36	21
30....	42	14	15	11	....	10	155	796	673	164	38	19
31....	42	....	15	11	....	8	....	633	....	155	39	....
Total	934	665.0	395.1	414	259	289	1131.1	8512	20645	8538	2174	1762
Mean.	30.1	22.2	12.7	13.4	9.2	9.3	37.7	275	688	275	70.1	58.7
Max..	42	52	16	16	11	11	155	809	1070	598	155	201
Min..	20	8.7	8.7	11	8	8	6.6	74	536	155	33	19
Acre-ft.	1850	1320	784	821	514	573	2240	16880	40950	16930	4310	3490

Total run-off for water year 1937-38=90,660 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Willow Creek Near Granby, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	21	24	....	....	....	....	15	53	251	75	28	18
2....	21	23	....	....	....	....	15	49	231	68	26	18
3....	21	11	....	....	....	....	14	48	231	59	26	18
4....	20	11	....	....	....	....	13	57	224	55	26	18
5....	20	12	....	....	....	....	14	98	208	52	24	17
6....	20	12	....	....	....	....	14	119	184	53	24	18
7....	20	12	....	*11	....	....	14	147	169	58	24	28
8....	20	12	....	....	....	....	15	184	156	63	22	20
9....	20	12	....	....	....	....	18	247	149	48	21	18
10....	20	12	....	....	....	....	22	293	142	46	21	18
11....	20	12	....	....	....	....	26	300	133	47	21	16
12....	20	13	....	....	....	....	30	284	133	51	20	15
13....	20	14	....	....	....	....	34	288	127	72	20	15
14....	20	15	....	....	....	....	38	313	125	72	19	15
15....	20	17	....	....	....	....	41	357	127	76	19	14
16....	20	16	....	....	....	....	45	385	117	61	24	14
17....	20	15	....	....	....	....	50	385	113	54	22	14
18....	20	13	....	....	....	....	53	371	110	53	36	14
19....	20	15	....	....	*13	....	57	373	106	50	32	13
20....	21	14	....	....	....	....	61	355	99	45	22	13
21....	22	14	....	....	....	*15	65	330	94	40	20	13
22....	21	13	....	....	....	....	69	302	96	34	18	13
23....	20	13	....	....	....	....	73	290	84	35	19	17
24....	20	13	....	....	....	....	76	286	79	35	19	18
25....	21	12	....	....	....	....	80	279	78	36	21	16
26....	22	14	....	....	....	....	84	274	112	35	20	15
27....	23	13	....	....	....	....	93	256	102	37	18	16
28....	23	12	....	....	....	....	98	263	79	36	18	16
29....	23	13	....	....	....	....	78	265	70	34	18	16
30....	23	12	....	....	....	....	62	270	69	32	19	16
31....	24	....	....	....	....	....	....	260	....	29	18	....
Total	647	414	356.5	294.5	336	403	1367	7781	3998	1541	685	490
Mean	20.9	13.8	11.5	9.5	12	13	45.6	251	133	49.7	22.1	16.3
Max.	24	24	....	....	....	....	98	385	251	76	36	28
Min.	20	11	....	....	....	....	13	48	69	29	18	13
Acres-ft.	1280	821	707	584	666	799	2710	15430	7930	3060	1360	972

Total run-off for water year 1936-37=36,320 acre-feet.

*Discharge measurement.

Discharge of Willow Creek Near Granby, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	24	19	17	8	7	8	21	486	644	142	36	19
2....	24	17	16	8	6	8	22	417	635	129	34	24
3....	20	17	15	8	6	8	22	380	635	118	31	55
4....	20	17	13	7	6	8	22	392	638	108	30	31
5....	19	14	13	7	7	8	21	272	596	100	29	28
6....	19	16	12	7	7	8	19	221	590	94	27	26
7....	19	16	13	7	7	8	19	198	542	87	27	30
8....	19	16	13	*7	7	7	19	160	500	81	28	34
9....	19	19	12	7	7	7	19	147	439	74	31	27
10....	19	19	12	7	*7	7	19	140	409	70	33	26
11....	17	19	13	7	7	7	21	147	378	68	29	26
12....	19	19	14	6	7	7	22	170	365	67	31	27
13....	19	16	14	7	7	8	25	260	365	65	28	31
14....	19	16	14	8	7	8	30	447	334	72	27	27
15....	23	17	14	9	7	8	25	563	296	90	26	22
16....	27	14	14	9	7	9	24	724	267	88	26	21
17....	26	14	14	8	6	9	30	763	250	80	24	20
18....	28	14	14	8	6	9	39	696	245	94	22	19
19....	24	14	14	8	6	10	44	650	236	70	21	19
20....	22	15	14	8	6	11	47	596	226	64	20	18
21....	25	16	12	9	6	*14	58	569	236	61	19	18
22....	24	14	10	8	6	14	74	581	255	58	19	19
23....	22	14	8	8	6	14	101	557	240	53	19	18
24....	22	16	9	7	6	15	139	536	214	49	19	19
25....	22	17	9	7	7	16	231	545	198	47	18	19
26....	21	14	9	7	7	16	286	587	180	47	19	20
27....	22	13	9	7	8	17	240	650	176	46	19	19
28....	22	14	9	7	8	18	236	683	162	52	21	17
29....	19	16	9	7	....	19	293	744	160	48	20	17
30....	19	16	9	7	....	20	375	776	155	39	19	16
31....	17	....	8	7	....	20	....	705	....	37	20	....
Total	661	478	376	232	187	346	2543	14692	10566	2298	772	712
Mean	21.3	15.9	12.1	7.5	6.7	11.2	84.8	474	352	74.1	24.9	23.7
Max.	28	19	17	9	8	20	375	776	644	142	36	55
Min.	17	12	8	6	6	7	19	140	155	37	18	16
Acres-ft.	1310	948	746	460	371	686	5040	29140	20960	4560	1530	1410

Total run-off for water year 1937-38=67,160 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Fraser River Above West Portal, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	25	17	10	8.8	6.2	5.0	4.8	11	6.4	4.2	1.9	18
2....	24	16	9.4	8.2	5.8	5.0	5.0	11	6.1	3.7	1.7	20
3....	23	9.6	10	8.2	6.2	5.2	4.8	12	6.1	3.5	1.7	23
4....	22	13	10	8.8	6.0	5.0	4.8	16	7.0	3.3	1.6	24
5....	22	15	9.0	9.0	7.0	4.8	4.8	20	6.4	3.3	1.5	22
6....	20	15	9.0	8.0	7.8	5.2	4.8	30	6.1	3.3	1.5	22
7....	20	13	10	8.0	7.6	5.2	4.8	32	6.1	3.7	1.5	22
8....	20	10	10	8.0	7.0	5.2	4.8	40	5.8	3.3	1.4	20
9....	20	11	8.8	7.8	6.2	5.2	5.2	57	5.4	3.3	1.4	20
10....	19	11	8.6	6.0	5.4	5.2	5.0	61	5.1	3.3	1.6	20
11....	19	12	8.2	6.1	6.2	5.2	6.0	61	4.8	3.3	4.8	19
12....	19	13	8.0	6.2	6.4	5.4	7.0	66	4.5	3.3	4.8	19
13....	18	14	8.0	6.0	6.0	5.4	10	72	4.2	3.3	7.3	18
14....	18	14	8.0	6.8	6.0	5.6	14	87	4.5	3.0	19	17
15....	18	14	9.0	7.0	6.1	5.4	19	100	4.2	2.6	19	17
16....	17	14	9.0	7.2	6.1	5.0	16	103	4.2	2.4	21	17
17....	17	14	9.5	7.4	6.8	5.0	12	100	4.2	2.1	25	24
18....	18	12	9.0	7.4	7.0	4.8	9.5	35	4.0	2.4	27	19
19....	17	14	9.0	7.0	7.0	4.8	9.9	11	4.0	2.1	21	17
20....	18	13	8.4	6.6	6.2	5.2	9.9	104	4.0	1.8	20	16
21....	18	12	8.4	6.0	5.8	5.8	11	160	4.0	1.7	19	16
22....	17	13	8.4	5.6	6.2	5.8	15	101	4.0	1.7	19	16
23....	17	12	8.4	5.8	6.0	5.8	13	106	4.0	1.7	18	18
24....	18	11	8.0	6.6	5.6	4.8	9.9	9.9	4.0	1.7	19	18
25....	17	12	8.6	6.8	5.4	5.2	11	7.7	9.5	1.7	19	17
26....	17	13	8.8	6.0	5.8	5.0	15	7.0	6.7	1.7	18	16
27....	17	12	9.4	6.8	5.8	4.8	17	6.7	4.5	2.4	18	16
28....	16	12	9.4	7.2	5.6	4.8	15	6.7	4.5	1.9	18	16
29....	17	13	9.0	7.4	....	4.8	13	6.7	4.2	1.8	20	15
30....	17	9.6	9.0	7.0	....	4.8	12	7.0	4.0	1.8	19	18
31....	17	....	9.2	7.0	....	4.8	....	6.7	....	2.1	18	....
Total	582	384.2	277.5	220.7	175.2	159.2	294.0	1394.4	152.5	81.4	389.7	560
Mean.	18.8	12.8	8.95	7.12	6.26	5.14	9.80	45.0	5.08	2.63	12.6	18.7
Max..	25	17	10	9.0	7.8	5.8	19	106	9.5	4.2	27	24
Min..	16	9.6	8.0	5.6	5.4	4.8	4.8	6.7	4.0	1.7	1.4	15
Acre-ft.	1150	762	550	438	348	316	583	2770	302	161	773	1110

Total run-off for water year 1936-37=9,260 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Table to Correct Fraser River Above West Portal, Colorado, for Diversion by Moffat Tunnel
For Water Year October, 1936 to September 30, 1937**

Month	Runoff in Acre-feet	Diverted by Moffat Tunnel Acre-feet	Corrected for Diversion Acre-feet
October	1150	0	1150
November	762	0	762
December	550	0	550
January	438	0	438
February	348	0	348
March	316	0	316
April	583	0	583
May	2770	1780	4550
June	302	5620	5920
July	161	3250	3410
August	773	633	1410
September	1110	0	1110
Total run-off for water year 1936-37.....	9260	11280	20550

Discharge of Fraser River Near West Portal, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	28	20	12	11	8.4	6.8	5.9	21	18	9.5	7.2	20
2....	27	18	11	10	7.8	6.4	7.2	20	18	9.1	6.8	21
3....	26	10	12	10	8.2	7.0	6.8	22	18	8.2	6.2	21
4....	25	16	12	11	8.0	6.0	6.2	30	20	7.8	5.9	24
5....	25	18	11	11	10	6.2	6.2	36	19	7.8	5.6	24
6....	24	18	11	10	11	6.4	6.5	46	19	7.8	5.6	24
7....	23	17	12	10	10	6.6	6.5	52	20	8.6	5.6	24
8....	23	12	12	10	9.8	6.6	6.5	54	18	7.5	5.2	23
9....	22	13	11	10	8.0	6.6	10	74	17	7.5	5.2	23
10....	23	14	11	8.2	6.8	6.4	7.8	80	14	7.5	5.2	22
11....	22	15	11	8.6	8.0	6.6	8.2	80	13	7.5	8.6	21
12....	22	15	10	9.0	8.2	6.8	9.9	83	12	9.9	8.6	20
13....	22	16	10	8.4	8.0	7.2	12	82	12	9.9	11	19
14....	21	16	10	9.6	8.6	7.6	17	105	12	9.1	24	19
15....	20	16	12	9.6	9.0	7.4	25	122	12	8.2	24	19
16....	20	16	12	10	8.0	7.2	32	122	11	7.2	26	19
17....	27	15	13	10	8.0	6.6	24	116	11	6.8	31	26
18....	19	18	12	9.6	9.0	5.6	21	57	11	7.2	32	20
19....	19	19	12	9.4	9.2	6.2	19	101	11	6.8	32	18
20....	20	16	11	9.2	8.4	7.2	17	132	10	6.2	29	17
21....	20	15	11	7.8	7.4	7.4	21	108	9.9	5.9	26	17
22....	19	16	11	7.0	8.6	7.6	28	112	9.9	5.6	24	17
23....	18	16	11	8.0	8.0	7.8	25	114	9.5	5.6	24	19
24....	18	13	11	9.0	6.8	7.8	18	98	9.5	5.6	22	19
25....	19	14	10	9.0	6.4	5.6	29	24	17	5.9	22	18
26....	19	15	11	8.6	7.4	6.4	26	22	18	5.9	22	17
27....	19	14	11	9.0	7.2	6.4	32	19	11	7.2	22	17
28....	20	14	12	9.4	7.0	5.6	29	19	9.9	6.5	21	17
29....	18	15	12	10	....	6.0	9.4	19	9.5	5.9	21	16
30....	18	11	11	9.2	....	5.8	20	22	9.1	6.2	22	19
31....	20	....	11	9.4	....	5.6	....	19	....	7.2	22	....
Total	666	461	350	290.4	231.2	205.4	499.7	2021	409.3	227.6	532.7	600
Mean.	21.5	15.4	11.3	9.37	8.26	6.63	16.7	65.2	13.6	7.34	17.2	20.0
Max..	28	20	13	11	11	7.8	32	132	20	9.9	32	26
Min..	18	10	10	7.0	6.4	5.6	5.9	19	9.1	5.6	5.2	16
Acre-ft.	1320	914	694	576	459	407	991	4010	812	451	1060	1190

Total run-off for water year 1936-37=12,880 acre-feet.

Discharge of Fraser River Near West Portal, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	26	16	19	10	10	10	12	24	35	17	5.8	5.5
2....	23	15	12	10	10	10	11	24	35	12	5.5	6.8
3....	21	15	12	9.8	10	10	12	22	39	19	5.5	26
4....	19	14	12	*9.1	10	10	12	19	53	12	5.5	63
5....	18	14	12	9.0	10	10	9.8	17	107	11	5.5	53
6....	17	16	12	9.2	9.8	9.8	9.4	16	101	11	5.3	47
7....	17	15	12	9.2	9.8	9.8	9.6	15	70	10	5.3	42
8....	19	14	12	9.4	9.8	10	9.8	15	35	10	5.5	45
9....	19	13	12	9.6	9.8	10	10	15	45	9.8	5.5	38
10....	18	13	11	9.8	9.8	10	10	16	34	9.4	5.5	34
11....	17	13	11	10	10	10	12	16	31	8.9	5.5	35
12....	19	13	11	10	10	9.8	11	19	33	8.9	5.5	41
13....	17	13	11	10	*10	9.6	12	24	39	8.9	5.8	36
14....	17	13	11	10	10	9.6	16	30	30	9.4	5.5	34
15....	19	13	11	10	10	9.4	16	32	28	8.4	5.3	33
16....	19	12	11	9.8	9.8	9.4	14	34	27	8.0	5.3	32
17....	19	12	11	9.8	9.6	9.4	12	35	25	8.0	5.2	31
18....	18	13	11	9.8	9.6	*9.5	14	39	24	8.0	5.2	30
19....	17	13	11	10	9.6	9.8	20	39	22	7.2	5.0	29
20....	17	13	11	10	9.8	9.8	22	36	22	7.2	5.0	28
21....	17	13	11	10	9.8	10	12	34	33	7.0	5.0	27
22....	17	12	11	10	10	10	14	34	68	7.0	5.0	26
23....	17	12	11	10	10	10	16	30	42	6.8	5.0	18
24....	17	12	11	10	9.8	10	21	30	20	6.5	5.0	8.4
25....	18	12	11	10	9.8	10	29	30	21	6.8	5.3	5.3
26....	17	12	11	10	9.8	8.4	27	31	16	6.8	6.5	5.0
27....	17	12	11	10	10	11	19	32	19	7.0	6.0	5.0
28....	17	12	10	9.8	10	11	19	35	22	7.2	6.0	5.0
29....	16	12	10	9.8	....	10	19	38	28	6.8	5.8	4.8
30....	16	12	10	9.8	....	12	26	38	27	6.0	6.5	5.0
31....	16	....	10	10	....	12	....	36	....	6.0	6.0	....
Total	561	394	346	303.9	276.6	310.3	456.6	855	1131	271.0	170.3	798.8
Mean.	18.1	13.1	11.2	9.80	9.88	10.0	15.2	27.6	37.7	8.74	5.49	26.6
Max..	26	16	12	10	10	12	29	39	107	17	6.5	63
Min..	16	12	10	9.0	9.6	8.4	9.1	15	16	6.0	5.0	4.8
Acre-ft.	1110	781	686	603	549	615	906	1700	2240	538	338	1580

Total run-off for water year 1937-38=11,650 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Table to Correct Fraser River Near West Portal, Colorado for Diversion by Moffat Tunnel For Water Year October 1, 1936 to September 30, 1937

Month	Runoff in Acre-feet	Diversion by Moffat Tunnel Acre-feet	Corrected for Diversion Acre-feet
October	1320	0	1320
November	914	0	914
December	694	0	694
January	576	0	576
February	459	0	459
March	407	0	407
April	991	0	991
May	4010	1780	5790
June	812	5620	6430
July	451	3250	3700
August	1060	633	1690
September	1190	0	1190
Total run-off for water year 1936-1937	12880	11280	24160

For Water Year October 1, 1937 to September 30, 1938

October	1110	0	1110
November	781	0	781
December	686	0	686
January	603	0	603
February	549	0	549
March	615	0	615
April	906	87	993
May	1700	3040	4740
June	2240	12380	14620
July	538	4760	5300
August	338	1560	1900
September	1580	476	2060
Total run-off for water year 1937-1938	11650	22300	33960

Discharge of Vasquez Creek Near West Portal, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	24	15	11	9.8	7.2	6.0	5.4	8.8	2.2	1.8	1.2	20
2....	23	15	10	9.4	7.0	6.0	6.0	8.8	2.2	1.7	2.5	21
3....	21	7.4	11	9.0	7.2	6.0	6.0	8.8	2.1	1.7	2.5	31
4....	21	12	11	9.5	7.0	5.8	5.4	10	2.5	1.7	2.2	31
5....	21	13	10	9.8	8.0	5.6	5.4	22	2.1	1.7	2.2	22
6....	21	13	10	9.2	9.0	6.0	5.4	27	1.7	1.7	2.1	22
7....	19	12	11	8.8	8.8	6.0	5.6	29	1.4	2.1	2.0	22
8....	20	11	11	8.8	8.0	6.0	6.0	31	1.1	1.1	1.9	21
9....	20	12	10	8.6	7.0	6.0	7.0	41	.8	1.7	1.9	19
10....	20	12	10	7.5	6.4	6.0	6.6	47	.8	1.7	1.7	18
11....	19	13	10	7.5	6.8	6.0	8.0	44	.5	.7	1.7	18
12....	19	14	9.4	7.6	7.2	6.2	9.0	45	.4	.2	1.7	17
13....	19	15	9.2	7.8	7.0	6.6	11	56	.4	.4	2.1	17
14....	18	15	9.4	8.0	6.8	6.8	13	70	.7	.5	1.8	17
15....	17	15	10	8.2	6.2	7.0	16	93	.7	.4	1.7	16
16....	17	15	10	8.2	6.6	6.8	23	96	.5	.6	1.8	16
17....	17	14	11	8.2	7.4	6.0	18	86	.4	.6	2.1	17
18....	17	15	10	8.2	7.8	5.4	14	98	.4	.7	2.7	15
19....	17	16	10	8.0	8.0	5.6	12	106	.4	1.2	2.1	14
20....	18	14	9.5	7.8	7.0	6.0	11	98	.5	.9	1.8	14
21....	17	13	9.5	7.0	6.8	6.5	13	82	.8	.8	1.7	14
22....	17	14	9.5	6.6	7.5	6.5	18	89	.8	.7	1.7	14
23....	16	13	9.5	7.0	6.8	6.2	16	93	.8	.6	1.6	18
24....	21	12	9.0	7.5	6.0	5.2	10	72	.8	.6	1.7	17
25....	20	13	9.4	7.5	6.0	5.4	14	80	1.1	.6	2.1	16
26....	16	13	9.4	7.8	6.4	5.6	17	44	1.7	.7	1.8	14
27....	17	13	10	8.0	6.4	5.2	17	51	2.1	.8	1.7	13
28....	16	13	10	8.2	6.2	5.0	17	11	3.7	.8	1.9	12
29....	17	13	9.8	8.2	....	5.0	11	3.0	2.0	.7	2.4	12
30....	21	11	9.8	7.8	....	5.0	9.2	3.0	1.7	.8	2.5	15
31....	16	....	9.8	7.6	....	5.2	....	2.5	....	.8	2.0	....
Total	582	396.4	309.2	253.1	198.5	182.6	336.0	1555.9	37.3	31.0	376.7	533
Mean..	18.8	13.2	9.97	8.16	7.09	5.89	11.2	50.2	1.24	1.00	12.2	17.8
Max..	24	16	11	9.8	9.0	7.0	23	106	3.7	2.1	2.7	31
Min..	16	7.4	9.0	6.6	6.0	5.0	5.4	2.5	.4	.2	1.2	12
Acre-ft.	1150	786	613	502	394	362	666	3090	74	61	747	1060

Total run-off for water year 1936-37=9,500 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Vasquez Creek Near West Portal, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	22	13	9.0	9.5	8.2	8.3	7.2	17	16	6.0	4.5	5.2
2.....	19	12	10	9.0	8.0	8.0	7.2	15	14	3.9	4.1	6.0
3.....	19	12	11	8.7	7.5	8.0	7.4	16	18	3.0	4.1	16
4.....	18	12	10	*8.5	7.5	7.8	8.0	14	22	9.0	4.1	31
5.....	16	13	10	8.0	7.5	7.2	8.5	12	33	98	3.9	31
6.....	15	16	10	7.8	7.0	6.8	8.0	11	31	69	3.4	29
7.....	14	11	9.9	7.5	7.0	6.8	8.5	9.5	19	43	3.1	29
8.....	16	9	10	8.0	7.2	7.0	8.8	9.0	19	27	3.2	34
9.....	15	10	10	8.5	7.6	7.2	9.0	8.2	21	1.4	3.2	29
10.....	15	10	10	9.0	7.8	7.0	9.0	8.2	32	.4	3.1	26
11.....	15	11	10	9.5	7.4	7.0	9.0	7.6	18	.3	3.1	26
12.....	15	12	10	9.5	7.2	7.2	10	8.2	14	.3	3.2	32
13.....	15	11	10	10	*7.1	7.2	11	12	20	.3	3.6	32
14.....	14	11	9.9	10	7.0	7.4	12	17	12	.3	3.2	28
15.....	16	11	9.7	10	7.2	7.6	13	20	4.5	.4	3.0	25
16.....	15	11	9.7	9.5	7.6	7.4	12	22	5.4	1.7	3.0	24
17.....	15	13	9.5	9.5	7.4	7.2	11	22	6.0	2.1	3.0	24
18.....	14	13	9.5	9.5	7.0	*7.1	12	25	3.9	2.1	2.8	22
19.....	14	14	9.2	10	7.0	7.4	14	25	2.6	2.0	3.1	22
20.....	19	11	9.0	9.5	7.4	7.6	15	21	2.4	2.4	4.3	22
21.....	14	11	9.0	9.2	7.6	7.2	14	21	6.5	2.1	4.3	21
22.....	14	12	9.5	10	8.0	7.2	16	19	14	2.1	4.3	21
23.....	14	10	10	9.0	7.6	7.8	13	19	7.1	1.8	4.3	16
24.....	15	11	10	9.0	7.2	7.8	14	19	3.0	1.9	4.5	5.7
25.....	15	12	11	8.8	7.0	8.0	18	19	218	2.0	4.7	4.3
26.....	15	11	10	9.0	7.4	7.5	21	20	197	3.2	5.4	4.1
27.....	15	10	9.6	9.0	7.6	7.0	16	26	197	5.7	5.0	3.9
28.....	15	9	9	8.5	8.0	7.0	11	20	207	6.0	5.2	3.9
29.....	13	10	9	8.2	....	7.0	12	22	200	5.7	5.4	3.9
30.....	12	11	9	8.0	....	7.0	15	45	35	5.4	6.0	3.9
31.....	13	....	10	8.0	....	6.6	....	22	....	5.2	5.7	....
Total	477	343	302.5	278.2	208.0	227.3	350.6	551.7	1398.4	313.7	123.8	580.9
Mean.	15.4	11.4	9.76	8.97	7.43	7.33	11.7	17.8	46.6	10.1	3.99	19.4
Max..	22	16	11	10	8.2	8.3	21	45	218	98	6.0	34
Min..	13	9	9.0	7.5	7.0	6.6	7.2	7.6	2.4	.3	2.8	3.9
Acres-ft.	946	680	600	552	413	451	695	1090	2770	622	246	1150

Total run-off for water year 1937-38=10,220 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Table to Correct Vasquez Creek Near West Portal for Diversion by Moffat Tunnel For Water Year October 1, 1936 to September 30, 1937

Month	Runoff in Acre-feet	Diverted by Moffat Tunnel Acre-feet	Corrected for Diversion Acre-feet
October	1150	0	1150
November	786	0	786
December	613	0	613
January	502	0	502
February	394	0	394
March	362	0	362
April	666	0	666
May	3090	891	3980
June	74	5620	5690
July	61	3250	3310
August	747	634	1380
September	1060	0	1060
Total run-off for water year 1936-1937.....	9500	10400	19890

For Water Year October 1, 1937 to September 30, 1938

October	946	0	946
November	680	0	680
December	600	0	600
January	552	0	552
February	413	0	413
March	451	0	451
April	695	60	755
May	1090	3430	4520
June	2770	10190	12960
July	622	5030	5650
August	246	1820	2070
September	1150	351	1500
Total run-off for water year 1937-1938.....	10220	20880	31100

Discharge of St. Louis Creek Near Fraser, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	27	18	12	11	9.4	7.6	8.0	11	107	94	38	18
2....	25	18	12	10	9.0	7.4	8.2	11	107	86	38	18
3....	25	20	12	10	9.4	7.4	8.0	11	112	79	36	26
4....	24	19	12	11	9.0	7.4	8.0	12	102	77	34	26
5....	25	18	11	12	9.8	7.4	8.0	22	86	76	32	21
6....	25	19	11	11	11	7.4	8.0	27	76	77	31	21
7....	23	16	12	11	10	7.6	8.2	34	74	88	31	23
8....	24	13	12	11	9.4	7.6	8.4	46	72	79	29	20
9....	24	14	10	11	9.0	7.6	8.6	51	71	71	28	19
10....	24	14	10	9.6	8.4	7.6	8.8	51	72	66	27	18
11....	23	15	9.6	9.6	8.2	7.8	10	48	86	65	27	18
12....	23	16	9.6	9.6	8.6	8.0	12	53	90	68	25	17
13....	22	17	9.6	9.6	8.2	8.0	14	51	86	68	24	17
14....	21	17	10	9.8	8.4	8.4	17	61	86	69	23	16
15....	20	17	10	10	8.4	9.4	22	72	86	66	21	16
16....	21	17	10	10	8.6	10	19	82	96	60	21	16
17....	20	17	11	11	9.2	10	16	84	107	59	27	16
18....	20	15	11	11	9.8	8.6	12	84	109	61	27	15
19....	20	17	10	10	9.8	8.2	12	94	107	56	22	14
20....	22	16	9.8	9.2	8.6	8.6	12	90	104	52	19	14
21....	20	15	9.6	8.4	8.2	8.8	14	88	112	51	19	14
22....	19	16	9.6	8.0	8.6	8.8	16	80	119	48	18	15
23....	16	15	9.6	8.4	8.6	8.4	14	102	112	47	17	20
24....	18	14	9.8	9.4	8.4	7.8	12	90	104	46	18	20
25....	18	15	9.8	9.8	7.6	8.2	12	98	121	45	20	17
26....	15	17	10	9.0	7.8	8.0	13	90	136	45	18	16
27....	16	16	11	9.8	8.0	7.8	16	82	109	46	19	16
28....	15	16	11	10	7.8	7.8	16	88	98	45	20	15
29....	18	17	11	11	....	7.8	14	114	98	41	25	15
30....	19	12	11	10	....	7.8	13	109	98	41	24	20
31....	18	....	11	10	....	7.8	....	107	....	40	19	....
Total	650	486	328.0	311.2	247.2	251.0	368.2	2043	2943	1912	777	537
Mean.	21.0	16.2	10.6	10.0	8.83	8.10	12.3	65.9	98.1	61.7	25.1	17.9
Max.	27	20	12	12	11	10	22	114	136	94	38	26
Min.	15	12	9.6	8.0	7.6	7.4	8.0	11	71	40	17	14
Acre-ft.	1290	964	651	617	490	498	730	4050	5840	3790	1540	1070

Total run-off for water year 1936-37=21,530 acre-feet.

Discharge of St. Louis Creek Near Fraser, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	28	15	11	8.8	10	10	6.8	37	158	208	51	39
2....	24	15	11	8.6	10	10	6.0	32	174	197	49	42
3....	22	15	11	8.6	10	9.8	6.4	29	214	188	48	53
4....	21	14	11	8.4	10	9.2	6.0	25	225	180	46	43
5....	19	16	10	8.2	10	8.8	6.0	20	233	166	44	40
6....	17	20	10	*8.0	10	8.4	6.4	17	230	153	42	37
7....	17	15	10	8.0	10	8.6	6.0	17	216	143	43	40
8....	20	14	10	8.2	10	9.0	6.4	15	216	138	43	45
9....	19	14	10	8.6	10	9.0	6.8	17	225	138	42	38
10....	18	15	10	9.0	10	8.8	7.2	20	239	130	40	36
11....	17	16	11	9.8	10	8.1	7.6	21	225	118	39	36
12....	17	16	11	9.8	*10	8.5	7.6	23	247	112	41	42
13....	16	16	11	9.6	10	8.5	8.4	31	256	110	46	39
14....	15	16	10	9.4	10	8.5	8.4	44	233	116	38	35
15....	18	16	10	9.4	10	8.2	8.4	51	216	101	35	33
16....	18	16	10	9.2	10	8.0	8.0	57	219	95	34	33
17....	18	16	10	9.2	10	7.8	7.6	61	230	93	32	33
18....	16	17	10	9.4	10	7.4	8.8	66	230	88	30	31
19....	17	17	9.8	9.6	10	*7.0	11	67	216	81	29	30
20....	19	14	9.6	9.8	10	6.9	12	64	225	77	29	29
21....	17	14	9.5	10	10	6.8	11	66	267	76	28	29
22....	17	12	9.5	10	10	6.8	11	66	284	73	26	28
23....	16	12	9.8	10	10	6.8	15	61	284	69	26	28
24....	14	12	10	10	9.5	6.8	17	63	272	66	33	29
25....	14	12	10	10	9.2	6.0	22	69	261	63	41	29
26....	15	12	9.2	10	9.5	5.7	26	81	256	62	43	27
27....	15	12	9.0	10	9.8	7.2	22	95	247	63	35	26
28....	16	11	9.0	10	10	7.2	22	121	236	62	34	25
29....	15	11	9.0	10	....	7.2	25	153	230	58	41	25
30....	16	11	9.0	10	....	7.2	33	156	228	55	47	24
31....	15	....	9.0	10	....	7.2	....	148	....	52	43	....
Total	546	432	309.4	289.6	278.0	245.4	355.8	1793	6992	3331	1198	1024
Mean.	17.6	14.4	9.98	9.34	9.93	7.92	11.9	57.8	233	107	38.6	34.1
Max.	28	20	11	10	10	10	33	156	284	208	51	53
Min.	14	11	9.0	8.0	9.2	5.7	6.0	15	158	52	26	24
Acre-ft.	1080	857	614	574	551	487	706	3560	13870	6610	2380	2030

Total run-off for water year 1937-38=33,320 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Ranch Creek Above Forks Near Fraser, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.2	20	12	4.5	2.5
2....	*2.7	.....	.....	.....	.....	.....	1.4	23	11	4.1	2.5
3....	2.0	23	10	3.8	2.5
4....	2.9	20	9.8	3.6	2.5
5....	4.1	17	9.2	3.4	2.5
6....	6.8	15	8.6	3.2	2.5
7....	9.2	14	8.0	2.9	2.5
8....	11	13	7.7	2.7	2.4
9....	11	13	8.6	2.5	2.3
10....	13	13	7.7	2.5	2.3
11....	12	16	7.7	2.5	2.2
12....	11	15	8.0	2.4	2.2
13....	13	14	8.3	2.4	2.2
14....	18	14	8.0	2.3	2.2
15....	20	14	7.1	2.2	2.1
16....	Apr. 18	18	15	6.2	2.5	2.2
17....	to 30	14	15	6.5	2.6	2.1
18....	1.2	18	15	5.9	3.2	2.1
19....	1.2	16	14	5.6	2.9	2.1
20....	1.2	14	14	5.3	2.6	2.1
21....	1.2	12	15	4.8	2.5	2.1
22....	1.4	14	15	4.5	2.5	2.1
23....	1.3	13	15	4.5	2.5	2.1
24....	1.2	14	14	4.5	2.5	2.1
25....	1.2	15	20	4.3	2.5	2.1
26....	1.3	15	21	4.5	2.5	2.1
27....	1.4	15	16	4.3	2.5	2.1
28....	1.2	20	14	4.3	2.5	2.1
29....	1.2	20	13	4.1	2.6	2.1
30....	1.2	23	12	4.3	2.5	2.3
31....	20	.....	4.5	2.5	.....
Total	16.2	397.6	472	209.8	86.4	67.2
Mean..	1.25	12.8	15.7	6.77	2.79	2.24
Max..	1.4	23	23	12	4.5	2.5
Min..	1.2	1.2	12	4.1	2.2	2.1
Acre-ft.	32	789	936	416	171	133

Total run-off for period=2,480 acre-feet.

*Discharge measurement.

Discharge of Ranch Creek Above Forks Near Fraser, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.6	2.0	.....	.....	.....	.....	.....	.....	33	38	6.8	3.6
2....	2.5	2.0	.....	.....	.....	.....	.....	.....	38	36	6.5	5.3
3....	2.5	1.9	.....	.....	.....	.....	.....	.....	45	33	6.2	9.0
4....	2.4	2.0	.....	.....	.....	.....	.....	.....	49	33	5.9	5.3
5....	2.3	.....	.....	.....	.....	.....	.....	.....	48	29	5.3	6.5
6....	2.2	.....	.....	.....	.....	.....	.....	.....	47	26	5.0	5.0
7....	2.1	.....	.....	.....	.....	.....	.....	.....	45	23	5.0	4.5
8....	2.3	.....	.....	.....	.....	.....	.....	.....	43	22	5.0	4.5
9....	2.3	.....	.....	.....	.....	.....	.....	.....	44	20	5.0	4.3
10....	2.2	.....	.....	.....	.....	.....	.....	.....	49	19	4.8	4.3
11....	2.2	.....	.....	.....	.....	.....	.....	.....	48	18	4.5	4.1
12....	2.2	.....	.....	.....	.....	.....	.....	.....	51	18	4.5	3.4
13....	2.1	.....	.....	.....	.....	.....	.....	.....	52	17	4.8	2.7
14....	2.1	.....	.....	.....	.....	.....	.....	.....	48	17	4.1	3.4
15....	2.2	.....	.....	.....	.....	.....	.....	.....	47	16	3.8	3.2
16....	2.2	.....	.....	.....	.....	.....	.....	.....	47	16	3.6	2.9
17....	2.2	.....	.....	.....	.....	.....	.....	.....	48	15	3.4	2.7
18....	2.1	.....	.....	.....	.....	.....	.....	.....	47	15	3.4	2.6
19....	3.2	.....	.....	.....	.....	.....	.....	.....	45	13	3.2	2.5
20....	3.4	.....	.....	.....	.....	.....	.....	.....	47	13	2.9	2.5
21....	2.1	.....	.....	.....	.....	.....	.....	.....	54	12	2.7	2.5
22....	2.1	.....	.....	.....	.....	.....	.....	May 24	56	11	2.7	2.4
23....	2.2	.....	.....	.....	.....	.....	.....	to 31	53	10	2.7	2.4
24....	2.2	.....	.....	.....	.....	.....	.....	6.5	51	9.4	2.6	2.4
25....	2.1	.....	.....	.....	.....	.....	.....	6.8	49	9.0	2.9	2.4
26....	2.1	.....	.....	.....	.....	.....	.....	9.8	48	8.7	3.6	2.3
27....	2.1	.....	.....	.....	.....	.....	.....	16	45	8.4	2.9	2.4
28....	2.1	.....	.....	.....	.....	.....	.....	21	44	8.0	2.9	2.6
29....	2.3	.....	.....	.....	.....	.....	.....	30	44	8.0	3.1	2.6
30....	2.2	.....	.....	.....	.....	.....	.....	34	44	7.7	3.4	2.6
31....	2.0	.....	.....	.....	.....	.....	.....	30	.....	7.1	3.4	.....
Total	70.8	.....	.....	.....	.....	.....	.....	154.1	1409	536.3	126.6	106.9
Mean..	2.28	.....	.....	.....	.....	.....	.....	19.3	47.0	17.3	4.08	3.56
Max..	3.4	.....	.....	.....	.....	.....	.....	34	56	38	6.8	9.0
Min..	2.0	.....	.....	.....	.....	.....	.....	6.5	33	7.1	2.6	2.3
Acre-ft.	140	.....	.....	.....	.....	.....	.....	306	2790	1060	251	212

Total run-off for period=4,759 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Ranch Creek Near Fraser, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	12	8.8	6.0	5.0	3.8	3.6	3.5	8.6	75	39	15	9.2
2....	12	9.2	5.8	4.6	3.7	3.5	3.7	8.6	78	35	14	9.8
3....	11	6.7	5.8	4.6	3.8	3.5	3.5	9.2	76	32	13	9.8
4....	11	7.8	6.0	4.7	3.8	3.6	3.5	12	72	31	12	11
5....	11	8.4	5.4	4.9	4.3	3.5	3.5	16	62	29	12	9.4
6....	10	9.0	5.8	4.4	4.9	3.6	3.6	18	55	27	12	9.4
7....	9.8	8.0	6.0	4.4	4.7	3.6	3.6	21	52	28	12	9.4
8....	10	6.0	5.8	4.4	4.4	3.6	3.6	25	50	25	11	8.8
9....	10	6.2	5.4	4.4	3.8	3.6	3.7	35	47	25	11	8.6
10....	10	6.4	5.2	3.6	3.5	3.6	3.8	42	48	22	11	8.2
11....	9.8	6.8	5.0	3.6	3.9	3.6	4.1	39	53	22	10	8.2
12....	9.8	7.4	5.0	3.7	4.0	3.7	5.0	38	55	25	9.8	7.8
13....	9.6	8.0	5.0	3.6	3.7	3.8	7.0	45	51	26	9.8	7.6
14....	9.6	8.0	5.0	3.9	3.7	3.9	10	56	51	25	9.4	7.6
15....	9.4	8.0	5.6	4.0	3.7	3.7	12	71	51	22	9.4	7.4
16....	9.4	7.8	5.6	4.4	3.7	3.6	10	73	51	20	10	7.4
17....	9.2	7.6	6.0	4.4	3.7	3.5	8.6	69	51	20	12	7.4
18....	9.2	7.8	5.6	4.4	4.2	3.5	8.2	74	51	20	13	7.2
19....	9.2	7.2	5.6	4.4	4.5	3.4	8.6	74	51	17	12	7.0
20....	9.8	7.4	5.2	4.2	3.9	3.6	8.8	68	48	17	10	7.0
21....	9.6	7.4	5.2	3.8	3.7	3.9	10	61	47	16	9.6	7.0
22....	9.4	7.4	5.2	3.5	3.9	3.9	11	65	47	15	9.4	7.2
23....	9.2	7.2	5.2	3.8	3.8	3.7	10	66	43	16	9.2	8.0
24....	12	7.0	5.0	4.0	3.7	3.4	9.4	68	41	16	9.4	7.6
25....	9.8	7.4	5.2	4.1	3.7	3.5	11	74	55	15	9.8	7.2
26....	9.2	7.6	5.4	3.8	3.9	3.5	11	66	61	15	9.2	6.6
27....	9.4	7.2	5.4	4.0	3.9	3.5	12	65	47	16	9.0	6.6
28....	9.0	7.2	5.4	4.2	3.9	3.5	11	75	42	15	9.2	6.4
29....	10	7.4	5.2	4.2	....	3.5	9.8	78	39	14	10	6.3
30....	12	5.7	5.2	4.2	....	3.5	9.0	83	38	14	10	7.2
31....	9.0	....	5.2	4.1	....	3.5	....	75	....	15	9.4	....
Total	310.4	224.0	168.4	129.3	110.2	111.4	222.5	1578.4	1588	674	332.6	238.3
Mean.	10.0	7.47	5.43	4.17	3.94	3.59	7.42	50.9	52.9	21.7	10.7	7.94
Max..	12	9.2	6.0	5.0	4.9	3.9	12	83	78	39	15	11
Min..	9.0	5.7	5.0	3.5	3.5	3.4	3.5	8.6	38	14	9.0	6.3
Acre-ft.	616	444	334	256	219	221	441	3130	3150	1340	660	473

Total run-off for water year 1936-37=11,280 acre-feet.

Discharge of Ranch Creek Near Fraser, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	11	7.5	6.6	4.2	4.4	4.2	4.0	34	184	125	16	11
2....	8.8	7.3	6.6	4.0	4.4	4.0	4.0	31	191	100	15	12
3....	7.8	7.3	6.6	4.0	4.3	4.0	4.0	30	212	93	14	33
4....	7.5	7.3	6.2	3.9	4.2	3.9	4.0	24	235	91	14	18
5....	6.7	9.8	6.0	3.9	4.2	3.9	4.0	21	224	78	13	16
6....	6.5	13	6.0	3.9	4.2	3.9	4.0	19	216	73	13	13
7....	6.3	8.0	6.0	3.9	4.2	3.9	3.9	18	198	67	13	12
8....	7.1	7.0	6.0	3.9	4.2	3.9	3.9	16	184	62	14	12
9....	6.9	7.0	6.0	3.9	4.2	3.9	3.9	16	192	58	14	12
10....	6.7	7.0	6.0	3.9	4.2	3.9	4.0	17	200	55	13	11
11....	6.7	7.2	6.0	3.9	4.2	3.9	4.0	17	195	51	12	12
12....	6.7	7.2	6.0	3.9	4.4	3.9	4.3	19	202	47	12	16
13....	6.5	7.0	6.0	3.9	4.9	3.9	4.8	27	212	44	14	15
14....	6.1	7.0	5.8	3.9	4.8	4.0	6.3	43	188	46	12	12
15....	7.3	7.0	5.5	4.0	4.8	4.2	6.7	49	178	42	11	12
16....	7.8	7.0	5.2	4.0	4.6	4.0	5.2	58	173	39	11	12
17....	7.3	7.6	5.0	4.0	4.6	4.0	5.2	61	178	39	10	12
18....	6.9	8.0	5.0	4.0	4.4	4.2	6.3	63	173	36	9.8	11
19....	6.7	8.2	5.0	4.2	4.3	4.2	7.8	66	164	34	9.5	11
20....	10	8.0	5.0	4.3	4.3	4.2	6.5	66	173	33	9.2	11
21....	7.5	7.5	5.0	4.4	4.2	4.2	6.5	68	205	30	9.0	11
22....	7.3	7.2	5.0	4.4	4.2	4.2	7.1	66	212	28	8.8	11
23....	7.5	7.2	5.2	4.3	4.2	4.2	8.5	62	191	26	8.8	11
24....	8.2	7.0	5.2	4.3	4.2	4.2	9.5	62	179	24	8.5	11
25....	8.0	7.0	5.4	4.3	4.0	4.2	13	66	172	23	9.2	11
26....	7.8	6.8	4.8	4.3	4.0	4.0	19	77	164	22	11	10
27....	7.8	6.8	4.4	4.3	4.2	4.2	16	92	157	22	9.5	10
28....	7.8	6.8	4.2	4.3	4.2	4.2	14	121	147	21	10	10
29....	7.5	6.8	4.0	4.4	....	4.2	19	164	149	20	10	10
30....	7.5	6.8	4.0	4.6	....	4.2	29	184	144	18	12	9.8
31....	7.5	....	4.2	4.4	....	4.2	....	175	....	17	11	....
Total	231.7	225.3	167.9	127.6	121.0	126.0	238.4	1832	5592	1464	357.3	378.8
Mean.	7.47	7.51	5.42	4.12	4.32	4.06	7.95	59.1	186	47.2	11.5	12.6
Max..	11	13	6.6	4.6	4.9	4.2	29	184	235	125	16	33
Min..	6.1	6.8	4.0	3.9	4.0	3.9	3.9	16	144	17	8.5	9.8
Acre-ft.	460	447	333	253	240	250	473	3630	11090	2900	709	751

Total run-off for water year 1937-38=21,540 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Ranch Creek Near Tabernash, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	22	15	9.4	8.0	1.2	0	2.5	24	143	78	27	17
2....	21	13	9.2	7.6	1.1	0	3.0	24	144	67	25	19
3....	19	10	9.4	7.6	1.1	0	2.6	24	150	58	23	19
4....	18	13	9.4	8.2	1.1	0	2.5	28	152	49	21	22
5....	18	14	8.6	8.0	1.3	0	2.8	43	127	48	20	18
6....	18	14	9.0	7.8	1.5	0	3.4	47	108	49	22	17
7....	16	14	9.2	7.4	1.3	0	4.5	59	105	60	20	17
8....	16	11	8.6	7.4	1.1	0	6.0	64	100	47	17	15
9....	16	11	8.4	6.4	1.0	0	15	88	96	43	17	15
10....	16	11	8.0	5.6	1.0	0	20	103	92	46	16	14
11....	16	11	7.8	5.8	.8	0	23	97	96	41	15	13
12....	15	12	7.8	5.7	.6	0	28	91	97	51	14	12
13....	15	13	7.8	5.6	.4	0	38	105	94	59	15	11
14....	14	13	7.8	6.2	.2	.1	54	128	92	58	14	11
15....	14	13	7.8	6.2	0	.1	74	164	91	50	14	11
16....	13	13	8.2	6.0	0	.1	62	173	91	42	16	11
17....	13	13	8.2	6.0	0	.1	52	161	94	42	30	12
18....	13	12	8.6	5.8	0	.1	41	157	92	46	27	11
19....	13	13	8.2	4.8	0	.1	44	166	91	38	26	11
20....	17	12	8.0	3.6	0	.1	50	143	86	34	22	10
21....	17	12	7.8	2.4	0	.1	58	134	86	30	20	10
22....	16	12	7.8	1.6	0	.1	58	132	88	28	18	11
23....	15	11	7.8	1.2	0	.1	44	141	81	27	17	14
24....	14	11	7.6	1.2	0	.1	34	143	74	27	17	13
25....	15	11	8.0	1.2	0	.1	40	188	91	27	20	12
26....	15	12	8.2	1.2	0	.1	40	157	152	29	18	11
27....	14	11	8.6	1.2	0	.2	42	141	94	30	17	11
28....	15	11	8.6	1.3	0	.4	38	148	78	27	18	11
29....	13	11	8.4	1.3	....	.6	29	161	69	25	23	10
30....	14	10	8.4	1.3	....	1.0	24	175	65	24	27	14
31....	15	....	8.4	1.3	....	2.0	....	152	....	27	19	....
Total	486	363	259.0	144.9	13.7	5.5	935.3	3561	3019	1307	615	403
Mean.	15.7	12.1	8.35	4.67	.49	.18	31.2	115	101	42.2	19.8	13.4
Max..	22	15	9.4	8.2	1.5	2.0	74	188	152	78	30	22
Min..	13	10	7.6	1.2	0	0	2.5	74	65	24	14	10
Acre-ft.	964	720	514	287	27	11	1860	7060	5990	2590	1220	799

Total run-off for water year 1936-37=22,040 acre-feet.

Discharge of Ranch Creek Near Tabernash, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	34	17	16	7.8	7.2	6.8	7	139	356	206	24	19
2....	25	17	16	7.8	7.2	6.8	7	120	372	182	22	22
3....	22	16	15	7.8	7.2	6.8	8	100	386	171	22	71
4....	20	16	14	7.6	7.2	6.8	9	96	417	168	20	33
5....	17	14	13	*7.6	7.2	6.8	9	78	402	150	19	30
6....	15	20	13	7.6	7.2	6.7	10	63	382	130	18	25
7....	14	16	13	7.6	7.2	6.6	10	60	356	118	18	26
8....	17	20	13	7.6	7.4	6.6	10	53	340	105	20	29
9....	17	22	13	7.6	7.4	6.4	11	60	330	97	22	24
10....	17	20	13	7.6	7.6	6.4	11	67	356	90	20	22
11....	16	20	13	7.2	*7.8	6.4	13	68	328	82	18	22
12....	16	21	14	7.2	7.6	6.4	15	79	332	76	17	30
13....	15	18	14	7.2	7.4	6.6	18	102	358	72	20	30
14....	14	18	15	7.4	7.2	6.6	21	148	322	81	17	24
15....	18	15	15	7.4	7.0	6.8	17	170	292	75	16	22
16....	20	15	14	7.2	6.6	7.0	19	194	284	68	15	20
17....	20	15	14	7.2	6.4	7.2	22	206	286	63	15	20
18....	23	16	14	7.0	6.4	7.4	28	204	292	62	14	19
19....	18	16	14	6.8	6.2	7.6	30	206	268	52	13	18
20....	20	17	14	6.8	6.0	7.8	45	208	274	51	12	17
21....	19	15	11	7.0	6.0	7.6	60	202	312	48	13	17
22....	17	15	9.0	7.0	6.0	7.6	55	212	352	44	12	17
23....	17	15	7.5	7.0	6.0	7.4	*85	180	326	40	12	17
24....	20	15	7.8	6.8	6.0	*7.3	78	177	290	37	15	17
25....	20	15	8.0	6.8	6.2	7.2	88	184	280	35	15	17
26....	20	15	8.4	6.8	6.2	7.4	94	208	256	34	17	16
27....	19	15	8.4	6.8	6.2	7.6	76	250	250	34	14	15
28....	19	15	8.4	6.8	6.4	7.2	68	288	236	34	14	15
29....	18	16	8.4	7.0	....	7.2	82	346	228	31	19	15
30....	17	16	8.2	7.0	....	7.0	125	384	238	28	24	15
31....	17	....	8.0	7.2	....	6.8	....	354	....	27	22	....
Total	581	501	373.1	224.2	190.4	216.8	1131	5206	9501	2491	539	684
Mean.	18.7	16.7	12.0	7.23	6.80	6.99	37.7	168	317	80.4	17.4	22.8
Max..	34	22	16	7.8	7.8	7.8	125	384	417	206	24	71
Min..	14	15	7.5	6.8	6.0	6.4	7	53	228	27	12	15
Acre-ft.	1150	994	740	445	378	430	2240	10330	18840	4940	1070	1360

Total run-off for water year 1937-38=42,920 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Fraser River at Granby, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	166	76	76	35	38	44	39	796	949	501	84	86
2....	123	72	72	34	38	46	40	632	970	447	82	91
3....	101	72	66	33	37	43	41	614	977	400	86	273
4....	92	72	64	33	38	43	43	517	998	395	79	221
5....	83	62	58	*34	39	43	54	452	1010	447	76	183
6....	77	66	59	33	40	42	58	370	998	390	75	154
7....	72	81	60	33	41	40	55	333	928	342	74	147
8....	79	67	60	33	43	38	57	308	887	312	82	186
9....	85	83	59	33	45	40	63	324	860	250	81	157
10....	77	94	59	32	48	41	69	361	935	221	78	134
11....	76	99	61	31	*51	40	69	361	860	214	75	136
12....	76	83	64	32	49	39	86	395	847	214	71	163
13....	76	85	66	33	47	39	126	479	928	190	79	183
14....	69	85	66	37	44	39	150	669	860	217	74	144
15....	86	77	66	42	41	40	99	796	751	196	71	131
16....	92	74	66	40	38	42	112	914	732	183	69	123
17....	88	69	63	38	37	43	140	900	732	186	66	121
18....	110	74	61	35	36	45	201	887	744	176	65	114
19....	85	85	63	35	35	*48	300	874	663	150	63	109
20....	79	72	64	36	34	50	231	880	656	141	60	107
21....	90	72	45	38	34	47	216	854	764	141	60	105
22....	81	71	37	37	33	45	300	854	880	141	60	105
23....	81	58	32	35	33	45	447	744	860	121	60	103
24....	79	65	35	34	33	47	539	706	738	111	66	82
25....	81	70	36	33	34	48	638	694	841	111	91	75
26....	79	64	37	34	35	50	719	751	776	109	96	70
27....	76	63	37	34	36	50	550	860	744	111	78	69
28....	77	67	37	36	39	49	512	928	764	111	74	67
29....	74	72	36	36	....	47	590	998	706	109	76	66
30....	74	70	35	37	....	42	669	1040	694	93	100	64
31....	72	....	35	39	....	37	....	977	....	84	109	....
Total	2656	2220	1675	1085	1096	1352	7213	21268	25052	6814	2360	3769
Mean.	85.7	74.0	54.0	35.0	39.1	43.6	240	686	835	220	76.1	126
Max..	166	99	76	42	51	50	719	1040	1010	501	109	273
Min..	69	58	32	31	33	37	39	308	656	84	60	64
Acre-ft.	5270	4400	3320	2150	2170	2680	14310	42180	49690	13520	4680	7480

Total run-off for water year 1937-38=151,800 acre-feet.

*Discharge measurement.

Discharge of North Fork of Ranch Creek Near Fraser, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.2	18	7.6	2.6	3.1
2....	2.2	20	7.1	2.6	3.2
3....	2.2	20	6.7	2.4	3.2
4....	2.4	18	6.2	2.2	3.3
5....	2.4	16	5.9	2.4	3.1
6....	2.8	15	6.1	2.4	3.1
7....	3.1	13	5.4	2.2	3.0
8....	3.3	13	4.8	2.2	2.8
9....	4.6	12	4.8	2.1	2.8
10....	5.8	12	4.6	2.0	2.7
11....	5.5	13	4.6	2.0	2.7
12....	5.5	13	4.7	2.0	2.7
13....	6.7	13	4.7	2.0	2.7
14....	8.4	13	4.2	1.8	2.7
15....	10	13	3.7	1.8	2.7
16....	12	14	3.5	2.6	2.7
17....	Apr. 18 to 30	12	14	4.0	2.8	2.7
18....	1.6	12	14	3.6	3.1	2.6
19....	1.6	12	13	3.2	2.9	2.6
20....	1.6	12	12	3.2	2.8	2.6
21....	1.7	12	12	3.0	2.6	2.6
22....	2.1	13	12	2.8	2.6	2.6
23....	2.2	13	11	2.7	2.6	2.8
24....	2.2	14	11	2.7	2.8	2.7
25....	2.2	16	12	2.8	2.9	2.6
26....	2.2	15	12	3.0	2.7	2.6
27....	2.3	14	8.8	2.9	2.8	2.5
28....	2.2	16	8.0	2.6	3.0	2.4
29....	2.2	18	7.3	2.6	3.4	2.4
30....	2.2	18	7.3	2.7	3.3	2.7
31....	18	....	2.6	3.2	....
Total	26.3	294.1	390.4	129.0	78.8	82.9
Mean.	2.02	9.49	13.0	4.16	2.54	2.76
Max..	2.3	18	20	7.6	3.4	3.3
Min..	1.6	2.2	7.3	2.6	1.8	2.4
Acre-ft.	52	583	774	256	156	164

Total run-off for period=1,980 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Fork of Ranch Creek Near Fraser, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.9	1.7	....	....	....	....	....	....	26	28	2.8	1.9
2....	2.8	1.6	....	....	....	....	....	....	29	26	2.7	2.6
3....	2.6	1.6	....	....	....	....	....	....	36	24	2.6	5.1
4....	2.5	1.6	....	....	....	....	....	....	46	22	2.6	3.2
5....	2.2	....	....	....	....	....	....	....	46	19	2.3	3.1
6....	2.0	....	....	....	....	....	....	....	45	19	2.2	2.8
7....	2.0	....	....	....	....	....	....	....	42	15	2.3	2.8
8....	2.1	....	....	....	....	....	....	....	41	13	2.2	2.8
9....	2.0	....	....	....	....	....	....	....	42	12	2.1	2.6
10....	2.1	....	....	....	....	....	....	....	45	11	2.1	2.6
11....	2.0	....	....	....	....	....	....	....	39	11	2.1	2.9
12....	2.0	....	....	....	....	....	....	....	41	10	2.2	3.6
13....	2.0	....	....	....	....	....	....	....	46	9.2	2.3	3.2
14....	1.9	....	....	....	....	....	....	....	42	8.9	2.0	3.0
15....	2.1	....	....	....	....	....	....	....	41	8.2	1.9	2.9
16....	2.0	....	....	....	....	....	....	....	41	7.8	1.8	2.9
17....	2.0	....	....	....	....	....	....	....	44	7.2	1.7	2.9
18....	1.7	....	....	....	....	....	....	....	41	7.0	1.6	2.9
19....	1.9	....	....	....	....	....	....	....	40	6.4	1.6	2.9
20....	2.0	....	....	....	....	....	....	....	41	6.4	1.5	2.9
21....	1.8	....	....	....	....	....	....	....	47	5.7	1.5	2.9
22....	1.8	....	....	....	....	....	....	May 24	43	5.1	1.4	2.9
23....	2.0	....	....	....	....	....	....	to 31	39	4.8	1.4	2.9
24....	2.0	....	....	....	....	....	....	6.6	37	4.4	1.3	2.9
25....	2.0	....	....	....	....	....	....	6.9	35	4.3	1.5	3.0
26....	1.9	....	....	....	....	....	....	8.0	34	4.2	1.9	2.8
27....	1.9	....	....	....	....	....	....	11	34	4.2	1.6	2.8
28....	1.9	....	....	....	....	....	....	14	33	3.7	1.7	2.7
29....	1.7	....	....	....	....	....	....	19	32	3.2	1.8	2.7
30....	1.7	....	....	....	....	....	....	23	31	3.1	2.0	2.6
31....	1.7	....	....	....	....	....	....	24	....	2.9	1.9	....
Total	63.2	....	....	....	....	....	....	112.5	1179	316.7	60.6	87.8
Mean.	2.04	....	....	....	....	....	....	14.1	39.3	10.2	1.95	2.93
Max..	2.9	....	....	....	....	....	....	24	47	28	2.8	5.1
Min..	1.7	....	....	....	....	....	....	6.6	26	2.9	1.3	1.9
Acre-ft.	125	....	....	....	....	....	....	223	2340	628	120	174

Total run-off for period=3,610 acre-feet.

Discharge of Middle Fork of Ranch Creek Near Fraser, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.3	22	14	4.1	1.8
2....	2.4	19	12	3.7	2.0
3....	3.5	20	10	3.2	2.0
4....	3.7	21	10	3.0	2.2
5....	4.5	19	8.9	3.0	1.8
6....	5.0	15	8.2	3.0	2.0
7....	4.6	15	7.8	2.9	2.0
8....	6.7	14	6.8	2.6	1.7
9....	8.6	10	6.8	2.6	1.6
10....	13	11	6.0	2.5	1.6
11....	12	14	6.0	2.4	1.5
12....	8.7	17	6.0	2.4	1.5
13....	10	14	6.2	2.4	1.4
14....	13	14	5.7	2.2	1.4
15....	16	14	5.2	2.2	1.4
16....	Apr. 18	19	12	4.8	2.5	1.4
17....	to 30	22	12	5.0	2.8	1.4
18....	2.6	19	12	4.8	3.2	1.4
19....	2.6	21	15	4.3	2.8	1.3
20....	2.6	18	16	3.9	2.3	1.3
21....	3.2	18	13	3.9	2.2	1.3
22....	2.7	19	13	3.7	2.0	1.4
23....	2.6	23	16	4.1	1.9	1.6
24....	2.5	24	16	3.9	2.0	1.6
25....	3.3	23	19	3.4	2.2	1.5
26....	3.8	19	23	3.9	1.8	1.5
27....	3.3	18	18	3.9	1.8	1.4
28....	3.0	19	16	3.4	1.8	1.3
29....	2.6	22	15	3.2	2.4	1.3
30....	2.4	22	15	3.9	2.2	1.7
31....	23	....	4.3	1.8	....
Total	37.2	443.0	470	184.0	77.9	47.3
Mean.	2.86	14.3	15.7	5.94	2.51	1.58
Max..	3.8	24	23	14	4.1	2.2
Min..	2.4	2.3	10	3.2	1.8	1.3
Acre-ft.	74	879	932	365	155	94

Total run-off for period=2,500 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Middle Fork of Ranch Creek Near Fraser, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.5	1.6	....	....	....	....	....	....	32	36	4.5	2.2
2....	2.2	1.6	....	....	....	....	....	....	36	35	4.3	3.1
3....	2.2	1.5	....	....	....	....	....	....	46	34	4.1	6.1
4....	2.0	1.4	....	....	....	....	....	....	58	33	4.0	4.0
5....	1.8	....	....	....	....	....	....	....	57	27	3.8	3.4
6....	1.7	....	....	....	....	....	....	....	52	23	3.4	3.2
7....	1.6	....	....	....	....	....	....	....	49	20	3.2	3.2
8....	1.9	....	....	....	....	....	....	....	46	18	3.2	3.1
9....	1.8	....	....	....	....	....	....	....	52	18	2.9	2.9
10....	1.8	....	....	....	....	....	....	....	61	16	2.7	2.7
11....	1.8	....	....	....	....	....	....	....	65	16	2.6	3.1
12....	1.8	....	....	....	....	....	....	....	73	14	2.7	4.0
13....	1.7	....	....	....	....	....	....	....	75	14	2.9	3.8
14....	1.6	....	....	....	....	....	....	....	61	14	2.4	3.4
15....	1.9	....	....	....	....	....	....	....	60	13	2.3	3.2
16....	1.8	....	....	....	....	....	....	....	57	12	2.2	3.4
17....	1.7	....	....	....	....	....	....	....	61	12	2.0	3.2
18....	1.5	....	....	....	....	....	....	....	60	11	1.8	3.2
19....	1.5	....	....	....	....	....	....	....	57	9.2	1.7	3.1
20....	3.7	....	....	....	....	....	....	....	60	8.9	1.5	3.1
21....	2.9	....	....	....	....	....	....	....	82	8.0	1.7	3.1
22....	1.6	....	....	....	....	....	....	May 24	75	7.4	1.5	2.9
23....	1.7	....	....	....	....	....	....	to 31	66	6.8	1.5	2.9
24....	1.7	....	....	....	....	....	....	8.6	61	6.3	1.4	2.9
25....	1.7	....	....	....	....	....	....	9.2	57	6.1	1.7	2.9
26....	1.7	....	....	....	....	....	....	11	49	6.1	2.0	2.7
27....	1.7	....	....	....	....	....	....	14	43	5.9	1.9	2.6
28....	1.7	....	....	....	....	....	....	18	39	5.4	2.0	2.4
29....	1.6	....	....	....	....	....	....	22	42	5.0	2.0	2.4
30....	1.6	....	....	....	....	....	....	28	40	4.7	2.3	2.3
31....	1.6	....	....	....	....	....	....	28	....	4.5	2.3	....
Total	58.0	....	....	....	....	....	....	138.8	1672	450.3	78.5	94.5
Mean..	1.87	....	....	....	....	....	....	17.4	55.7	14.5	2.53	3.15
Max..	3.7	....	....	....	....	....	....	28	82	36	4.5	6.1
Min..	1.5	....	....	....	....	....	....	8.6	32	4.5	1.4	2.2
Acre-ft.	115	....	....	....	....	....	....	275	3320	893	156	187

Total run-off for period=4,946 acre-feet.

Discharge of South Fork of Ranch Creek Near West Portal, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.3	....	....	....	....	....	1.3	15	6.4	2.4	1.5
2....	1.2	....	....	....	....	....	1.2	14	6.0	2.2	1.6
3....8	....	....	....	....	....	1.3	13	5.4	1.9	1.6
4....	1.1	....	....	....	....	....	2.0	13	5.4	1.8	1.6
5....	1.2	....	....	....	....	....	3.0	12	5.0	1.8	1.4
6....	1.2	....	....	....	....	....	3.4	12	5.0	1.7	1.6
7....	1.2	....	....	....	....	....	4.1	12	4.6	1.6	1.4
8....	1.2	....	....	....	....	....	5.0	12	4.3	1.6	1.2
9....	1.1	....	....	....	....	....	7.8	10	4.1	1.6	1.2
10....	1.1	....	....	....	....	....	8.4	10	3.9	1.5	1.2
11....	1.1	....	....	....	....	....	8.9	10	3.5	1.5	1.2
12....	1.1	....	....	....	....	....	9.8	9.8	3.7	1.5	1.2
13....	1.1	....	....	....	....	....	12	9.4	3.9	1.5	1.2
14....	1.1	....	....	....	....	....	14	9.4	3.4	1.4	1.2
15....	1.1	....	....	....	....	....	17	9.4	3.0	1.4	1.1
16....	1.0	....	....	....	....	....	18	9.1	2.8	1.6	1.1
17....	1.0	....	....	....	....	....	17	8.9	2.8	1.8	1.1
18....	1.0	....	....	....	....	....	18	8.9	2.6	2.2	1.0
19....	1.0	....	....	....	....	....	1.0	18	8.4	2.4	1.6
20....	1.1	....	....	....	....	....	1.0	18	8.1	2.3	1.4
21....	1.0	....	....	....	....	....	1.1	16	7.8	2.3	1.3
22....	1.0	....	....	....	....	....	1.6	16	7.6	2.2	1.3
23....	1.0	....	....	....	....	....	1.5	15	7.3	2.0	1.2
24....	1.0	....	....	....	....	....	1.2	16	7.3	2.0	1.3
25....	1.0	....	....	....	....	....	1.2	16	10	2.0	1.3
26....	1.0	....	....	....	....	....	1.6	15	9.1	2.0	1.3
27....	1.0	....	....	....	....	....	2.0	15	7.6	2.2	1.3
28....	1.0	....	....	....	....	....	1.8	15	6.6	2.0	1.3
29....9	....	....	....	....	....	1.6	15	6.4	2.0	1.6
30....8	....	....	....	....	....	1.4	15	6.4	2.2	1.4
31....	14	....	2.5	1.3	....
Total	31.7	....	....	....	....	....	17.0	356.2	290.5	103.9	48.6
Mean..	1.06	....	....	....	....	....	1.42	11.5	9.68	3.35	1.57
Max..	1.3	....	....	....	....	....	2.0	18	15	6.4	2.4
Min..8	....	....	....	....	....	1.0	1.2	6.4	2.0	1.2
Acre-ft.	63	....	....	....	....	....	34	707	576	206	96

Total run-off for period=1,753 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of South Fork of Ranch Creek Near West Portal, Colo., for Year Ending
Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.4	1.0							33	15	2.9	1.9
2....	1.5	1.0							32	13	2.9	3.0
3....	1.4	1.0							41	13	3.0	2.7
4....	1.3								34	12	2.9	1.8
5....	1.2								34	11	2.9	1.6
6....	1.1								34	10	2.7	1.5
7....	1.0								33	8.8	2.9	1.4
8....	1.2								31	8.3	2.7	1.5
9....	1.2								33	7.5	2.6	1.5
10....	1.2								35	7.1	2.5	1.4
11....	1.2								37	6.6	2.5	1.6
12....	1.2								39	6.2	2.5	1.9
13....	1.1								37	6.2	2.6	1.6
14....	1.1								35	6.0	2.4	1.5
15....	1.2								33	5.3	2.3	1.5
16....	1.1								32	5.3	2.2	1.6
17....	1.1								31	5.3	2.2	1.5
18....	1.0								29	4.8	2.1	1.5
19....	1.1								28	4.4	2.1	1.5
20....	1.1								28	4.2	2.0	1.5
21....	1.1								31	4.1	2.0	1.5
22....	1.0							May 24	34	3.8	1.9	1.5
23....	1.1							to 31	32	3.5	1.9	1.5
24....	1.2							9.5	29	3.5	1.8	1.5
25....	1.2							11	26	3.5	2.0	1.5
26....	1.1							12	23	3.4	2.2	1.4
27....	1.1							17	22	3.8	2.0	1.4
28....	1.1							23	19	3.5	1.9	1.3
29....	1.0							29	19	3.1	2.1	1.3
30....	1.0							29	17	3.1	2.2	1.3
31....	1.0							31	...	2.9	2.1	...
Total	35.6							161.5	921	198.2	73.0	48.2
Mean	1.15							2.02	30.7	6.39	2.35	1.61
Max.	1.5							31	41	15	3.0	3.0
Min.	1.0							9.5	17	2.9	1.8	1.3
Acre-ft.	71							320	1830	393	145	96

Total run-off for period=2,855 acre-feet.

Discharge of Meadow Creek Near Tabernash, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	7.5							6.5	72	17	4.2	3.1
2....	7.1							7.5	66	14	3.8	3.2
3....	7.5							9.0	68	12	3.5	3.4
4....	6.2							12	66	10	3.1	3.8
5....	6.6							16	50	9.9	3.1	3.1
6....	6.2							23	39	11	3.1	2.8
7....	4.1							34	32	15	2.9	2.7
8....	3.6							46	30	9.6	2.7	2.2
9....	2.9							60	25	9.0	2.5	2.1
10....	2.2							66	25	12	2.4	2.0
11....	1.6							60	31	8.3	2.2	1.7
12....	1.6							52	36	11	2.4	1.6
13....	1.9							65	34	22	2.5	1.4
14....	1.6							78	34	25	2.2	1.4
15....	1.3							91	34	21	4.2	1.4
16....	1.3							104	35	14	4.2	1.4
17....	1.3							91	35	11	12	1.6
18....	1.3							82	29	13	6.6	1.4
19....	1.6							82	29	8.8	4.4	1.4
20....	2.9						Apr. 22	92	27	6.8	3.4	1.4
21....	3.2						to 30	91	30	5.9	3.1	1.6
22....	2.9						7.7	95	32	5.2	2.7	1.6
23....	2.9						7	95	26	5.0	2.4	2.9
24....	1.9						6	96	22	4.8	2.2	2.4
25....	2.2						6.5	107	34	4.7	2.5	2.0
26....	2.5						6.5	94	71	5.0	2.1	1.7
27....	2.2						7	95	50	6.1	2.0	1.6
28....	2.9						6.5	102	36	5.4	2.1	1.4
29....	1.9						6	110	25	4.4	4.7	1.3
30....	1.3						5.5	95	20	4.1	5.9	2.5
31....	1.4						...	78	...	4.7	3.6	...
Total	95.6						58.7	2142.0	1143	316.0	106.5	62.1
Mean	3.08						6.52	69.1	38.1	10.2	3.44	2.07
Max.	7.5						7.7	110	72	25	12	3.8
Min.	1.3						5.5	6.5	22	4.4	2.0	1.3
Acre-ft.	190						116	4250	2270	627	211	123

Total run-off for period=7,737 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Meadow Creek Near Tabernash, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	7.1	3.8	....	....	....	....	....	37	140	47	3.9	2.3
2....	6.6	3.2	....	....	....	....	....	32	156	40	3.9	4.0
3....	6.4	3.1	....	....	....	....	....	27	159	39	3.8	1.2
4....	6.0	2.9	....	....	....	....	....	24	150	35	3.6	5.4
5....	3.8	1.6	....	*2.6	....	....	....	20	134	29	3.3	3.9
6....	2.7	1.1	....	....	....	....	....	17	117	26	3.2	3.3
7....	2.0	1.0	....	....	....	....	....	14	110	25	3.4	3.6
8....	2.8	1.0	....	....	....	....	....	12	101	22	3.4	4.8
9....	3.2	.7	....	....	....	....	....	11	112	19	3.4	2.8
10....	3.3	.4	....	....	....	....	....	11	114	17	2.9	2.3
11....	2.8	.8	....	....	....	....	....	12	104	16	2.7	2.9
12....	2.3	.9	....	....	....	....	....	13	105	14	2.7	4.8
13....	1.8	1.1	....	....	....	....	....	16	112	13	3.2	5.6
14....	1.6	2.1	....	....	....	....	....	24	80	18	2.7	3.9
15....	3.2	2.2	....	....	....	....	....	34	72	16	2.3	3.1
16....	3.8	2.2	....	....	....	....	....	48	74	12	2.0	2.7
17....	3.8	2.5	....	....	....	....	....	51	85	12	1.9	2.5
18....	3.4	2.9	....	....	....	....	....	49	79	12	1.8	2.2
19....	3.8	3.2	....	....	....	....	....	45	69	9.6	1.6	2.1
20....	3.3	3.7	....	....	....	....	....	44	80	8.5	1.6	1.7
21....	2.9	4.0	....	....	....	....	....	40	106	7.6	1.6	1.8
22....	2.9	4.5	....	....	....	....	....	36	105	7.1	1.5	1.8
23....	2.9	4.1	....	....	....	....	....	32	90	6.4	1.5	1.6
24....	4.2	3.6	....	....	....	*2.1	....	37	75	5.6	1.6	1.6
25....	5.2	3.2	....	....	....	....	....	45	72	5.4	1.6	1.6
26....	4.6	2.6	....	....	....	....	....	69	61	5.2	1.9	1.6
27....	4.4	2.2	....	....	....	....	....	104	59	5.2	1.6	1.5
28....	4.6	2.2	....	....	....	....	....	121	57	4.8	1.6	1.4
29....	3.8	2.3	....	....	....	....	....	141	61	4.5	2.2	1.4
30....	4.4	2.5	....	....	....	....	....	141	62	4.2	3.4	1.4
31....	3.8	....	....	....	....	....	....	127	....	3.9	2.9	....
Total	117.4	71.6	68.2	83.7	64.4	65.1	111	1434	2901	490.0	78.7	91.6
Mean.	3.79	2.39	2.2	2.7	2.3	2.1	3.7	46.3	96.7	15.8	2.54	3.05
Max..	7.1	4.5	....	....	....	....	....	141	159	47	3.9	1.2
Min..	1.6	.4	....	....	....	....	....	11	57	3.9	1.5	1.4
Acre-ft.	233	142	135	166	128	129	220	2840	5750	972	156	182

Total run-off for water year 1937-38=11,050 acre-feet.

*Discharge measurement.

Discharge of Strawberry Creek Near Granby, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.3	.6	.3	....	....	....	....	8.5	11	10	12	0.5
2....	5.3	.5	.4	....	....	....	....	10	10	9.7	11	.5
3....	4.9	.4	.3	....	....	....	....	10	9.1	9.4	11	.5
4....	4.5	.5	.3	....	....	....	....	17	11	9.7	9.1	1.3
5....	4.9	.5	....	....	....	....	....	20	9.7	9.1	8.8	.5
6....	5.3	.6	....	....	....	....	....	16	8.2	8.8	8.8	.5
7....	3.2	.6	....	....	....	....	....	18	8.2	11	8.8	.6
8....	3.6	.6	....	....	....	....	....	22	6.8	10	9.1	.8
9....	3.2	.6	....	....	....	....	....	26	5.2	9.7	9.1	1.0
10....	3.2	.9	....	....	....	....	....	32	5.7	11	8.5	1.0
11....	2.8	.9	....	....	....	....	....	31	5.2	10	7.7	1.5
12....	1.9	.9	....	....	....	....	....	30	4.6	11	8.0	1.0
13....	1.9	.9	....	....	....	....	....	30	4.6	12	9.1	.8
14....	1.9	.9	....	....	....	....	....	32	4.9	13	4.9	1.0
15....	1.6	.9	....	....	....	....	....	36	4.9	12	3.9	1.3
16....	1.6	.9	....	....	....	....	....	37	4.9	9.1	4.4	1.3
17....	1.1	.9	....	....	....	....	....	38	5.2	8.8	6.0	1.7
18....	.9	.6	....	....	....	....	....	36	6.0	10	4.9	1.5
19....	.6	.5	....	....	....	....	....	30	6.3	9.1	4.1	1.3
20....	.6	.5	....	....	....	....	....	27	5.4	9.4	2.7	1.7
21....	.5	.5	....	....	....	....	....	23	7.4	11	2.4	1.5
22....	.5	.5	....	....	....	....	....	21	9.1	11	1.3	1.7
23....	.5	.4	....	....	....	....	....	20	9.4	11	0	2.2
24....	.4	.2	....	....	....	....	....	21	8.5	11	.4	2.7
25....	.4	.3	....	....	....	....	....	21	12	11	1.7	2.4
26....	.5	.4	....	....	....	....	....	20	16	11	.6	2.7
27....	.4	.5	....	....	....	....	....	18	15	14	.4	2.9
28....	.5	.5	....	....	....	....	....	20	12	11	.4	2.7
29....	.3	.4	....	....	....	....	....	14	12	9.7	.6	2.7
30....	.4	.2	....	....	....	....	....	11	14	9.1	2.2	3.1
31....	.5	....	....	....	....	....	....	12	....	12	.6	....
Total	63.2	17.6	....	....	....	....	....	697.5	243.1	328.8	162.5	44.9
Mean.	2.04	.59	....	....	....	....	....	22.5	8.10	10.6	5.24	1.50
Max..	5.3	.9	....	....	....	....	....	38	16	13	12	3.1
Min..	.3	.2	....	....	....	....	....	8.5	4.6	8.8	0	.5
Acre-ft.	125	35	....	....	....	....	....	1380	482	652	322	89

Total run-off for period=3.085 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Strawberry Creek Near Granby, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.0	....	....	....	....	....	....	65	115	12	3.3	3.3
2....	5.2	....	....	....	....	....	....	63	108	11	3.0	1.8
3....	5.0	....	....	....	....	....	....	58	106	11	3.0	2.0
4....	4.7	....	....	....	....	....	....	50	97	12	2.5	5.5
5....	4.2	....	....	....	....	....	....	44	87	13	2.4	3.0
6....	3.5	*0.8	....	....	....	....	....	44	73	12	2.0	2.5
7....	3.3	....	....	....	....	....	....	35	60	11	1.8	2.5
8....	4.0	....	....	....	....	....	....	30	53	11	2.1	4.0
9....	4.5	....	....	....	....	....	....	29	46	13	2.4	2.1
10....	5.8	....	....	....	....	....	....	29	43	12	2.0	1.8
11....	5.2	....	....	....	....	....	....	31	36	12	1.7	2.2
12....	5.2	....	....	....	....	....	....	36	32	11	1.5	3.0
13....	4.5	....	....	....	....	....	....	49	29	11	2.0	4.5
14....	4.0	....	....	....	....	....	....	63	24	12	1.8	2.8
15....	5.2	....	....	....	....	....	....	85	22	12	1.5	2.2
16....	5.8	....	....	....	....	....	....	103	18	11	1.2	2.1
17....	6.3	....	....	....	....	....	....	114	17	11	1.1	2.0
18....	....	....	....	....	....	....	....	119	19	17	.9	1.7
19....	....	....	....	....	....	....	....	115	16	13	.8	1.7
20....	....	....	....	....	....	....	....	106	18	11	.6	1.4
21....	....	....	....	....	....	....	....	99	19	9.3	.3	1.4
22....	....	....	....	....	....	....	....	93	17	8.3	.3	1.4
23....	....	....	....	....	....	....	....	87	15	7.2	.3	1.4
24....	....	....	....	....	....	....	....	83	13	6.0	.6	1.4
25....	....	....	....	....	....	....	....	84	15	6.0	1.2	1.5
26....	....	....	....	....	....	....	....	91	14	6.0	1.2	1.3
27....	....	....	....	....	....	....	37	98	13	6.0	.8	1.2
28....	....	....	....	....	....	....	40	111	13	5.2	.7	1.2
29....	....	....	....	....	....	....	41	121	15	5.0	.9	1.1
30....	Oct. 1	....	....	....	....	....	55	119	16	4.2	2.2	1.0
31....	to 17	....	....	....	....	....	....	119	....	3.8	2.7	....
Total	82.4	....	....	....	....	....	....	2373	1169	306.0	48.8	65.0
Mean..	4.85	....	....	....	....	....	....	76.5	39.0	9.87	1.57	2.17
Max...	6.3	....	....	....	....	....	....	121	115	17	3.3	5.5
Min...	3.3	....	....	....	....	....	....	29	13	3.8	.3	1.0
Acre-ft.	163	....	....	....	....	....	....	4710	2320	607	97	129

Total run-off during period=8,026 acre-feet.

*Discharge measurement.

Discharge of Williams Fork River Below Steelman Creek, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	12	8.0	4.1	3.8	3.2	3.2	2.9	7	81	100	25	14
2....	11	8.4	3.8	3.7	3.1	3.1	2.9	7	87	83	24	16
3....	11	7.0	3.9	3.5	3.1	3.0	2.9	8	89	72	23	43
4....	11	7.2	4.3	3.5	3.2	3.0	2.9	9	78	73	20	34
5....	12	7.3	4.1	3.7	3.3	3.0	2.9	10	63	68	20	25
6....	12	7.0	4.0	3.6	3.4	3.1	2.9	12	58	72	20	24
7....	12	6.5	4.0	3.5	3.3	3.2	2.9	13	56	78	18	25
8....	11	6.0	4.0	3.5	3.1	3.4	2.9	15	59	61	16	21
9....	10	6.2	4.0	3.5	3.1	3.4	2.6	19	55	56	16	21
10....	10	6.1	4.1	3.4	3.1	3.4	2.7	30	60	51	15	20
11....	9.4	5.9	4.1	3.2	3.3	3.4	2.9	32	75	49	14	18
12....	9.4	5.8	4.0	3.2	3.3	3.3	3.1	32	83	47	13	18
13....	9.4	5.9	4.0	3.2	3.2	3.2	3.4	46	81	46	13	18
14....	9.4	6.0	3.9	3.2	3.3	3.1	3.9	60	87	46	12	18
15....	8.8	6.2	3.9	3.2	3.4	3.2	4.5	81	81	41	12	16
16....	8.8	6.4	4.2	3.2	3.2	3.2	5.1	79	96	37	13	16
17....	8.4	6.1	4.1	3.2	3.1	3.2	4.7	72	111	34	17	15
18....	8.4	5.4	4.1	3.2	3.1	3.2	4.4	75	113	35	21	14
19....	8.4	5.4	4.1	3.2	3.1	3.1	4.6	79	103	32	16	14
20....	8.8	5.3	4.1	3.2	2.9	3.1	4.5	76	111	30	13	13
21....	8.4	5.2	4.1	3.3	2.9	3.0	5.0	69	120	29	12	13
22....	9.1	5.2	4.0	3.3	2.9	3.1	6.5	81	122	27	11	13
23....	8.8	5.1	3.9	3.3	3.0	3.1	5.8	78	115	27	11	17
24....	8.0	4.7	4.0	3.3	3.0	2.6	5.4	78	107	27	12	16
25....	9.1	4.8	3.9	3.3	2.9	2.8	5.1	68	140	26	15	14
26....	10	4.7	3.9	3.2	2.9	2.9	6.4	61	147	26	14	13
27....	10	4.5	4.0	3.1	2.9	2.9	7.3	66	120	34	12	13
28....	8.8	4.3	4.0	3.1	3.2	2.9	6.8	86	107	28	13	12
29....	12	4.2	3.7	3.1	....	2.8	6.4	89	103	26	18	12
30....	14	4.1	3.8	3.3	....	2.9	6.4	91	122	27	16	13
31....	8.8	....	3.8	3.4	....	2.9	....	86	....	27	14	....
Total	308.2	174.9	123.9	103.4	87.5	95.7	130.7	1615	2830	1415	489	539
Mean..	9.94	5.83	4.00	3.34	3.12	3.09	4.36	52.1	94.3	45.6	15.8	18.0
Max...	14	8.4	4.3	3.8	3.4	3.4	7.3	91	147	100	25	25
Min...	8.0	4.1	3.7	3.1	2.9	2.6	2.6	7	55	26	11	12
Acre-ft.	611	347	246	205	174	190	259	3200	5610	2810	970	1076

Total run-off for water year 1936-37=15,690 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Williams Fork River Below Steelman Creek, Colo., for Year
Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	16	11	....	....	....	....	....	9	125	196	31	22
2....	15	12	....	....	....	....	....	9	147	175	31	23
3....	13	11	....	....	....	....	....	9	189	158	31	25
4....	13	9.4	....	....	....	....	....	10	192	147	28	22
5....	11	8.5	....	....	....	....	....	10	206	125	27	20
6....	10	10	....	....	....	....	....	11	186	110	25	19
7....	9.1	12	....	....	....	....	....	11	168	97	28	20
8....	10	9.5	....	....	....	....	....	12	154	93	28	25
9....	9.7	10	....	....	....	....	....	14	175	87	25	20
10....	10	11	....	....	....	....	....	16	168	83	24	18
11....	9.7	9.6	....	....	....	....	....	20	178	78	25	21
12....	10	8.2	....	....	....	....	....	22	231	75	23	25
13....	10	7.3	....	....	....	....	....	24	238	78	26	25
14....	8.8	7.0	....	....	....	....	....	26	203	89	22	21
15....	10	7.5	....	....	....	....	....	28	192	84	20	20
16....	10	7.9	....	....	....	....	....	32	206	78	18	18
17....	9.7	7.8	....	....	....	....	....	36	231	72	17	18
18....	10	7.5	....	....	....	....	....	44	210	68	16	18
19....	16	7.0	....	....	....	....	....	48	196	61	14	16
20....	18	7.1	....	....	....	....	....	53	224	61	13	16
21....	10	7.2	....	....	....	....	....	55	325	57	12	16
22....	9.4	7.1	....	....	....	....	....	56	313	52	12	14
23....	10	6.6	....	....	....	....	....	56	281	48	12	16
24....	11	6.0	....	....	....	....	....	54	253	46	13	16
25....	11	5.9	....	....	....	....	....	54	245	44	17	14
26....	11	6.0	....	....	....	....	....	56	231	43	21	14
27....	11	5.8	....	....	....	....	....	63	242	44	18	13
28....	11	5.5	....	....	....	....	....	89	231	41	16	12
29....	12	5.4	....	....	....	....	....	134	234	38	16	12
30....	11	5.4	....	....	....	....	....	108	224	35	22	12
31....	11	....	....	....	....	....	....	100	....	33	26	....
Total	347.4	242.2	142.6	120.9	100.8	99.2	153.0	1269	6398	2496	657	551
Mean.	11.2	8.07	4.6	3.9	3.6	3.2	5.1	40.9	213	80.5	21.2	18.4
Max..	18	12	....	....	....	....	....	134	325	196	31	25
Min..	8.8	5.4	....	....	....	....	....	9	125	33	12	12
Acre-ft.	689	480	283	240	200	197	303	2520	12690	4950	1300	1090

Total run-off for water year 1937-38=24,940 acre-feet.

Discharge of Williams Fork River Near Leal, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	57	42	23	22	20	20	18	36	322	301	79	42
2....	54	38	21	20	19	19	18	38	348	256	78	46
3....	52	29	23	21	20	19	18	39	343	229	73	81
4....	52	32	25	22	21	19	18	52	330	214	70	79
5....	55	41	23	21	21	19	18	71	264	214	66	63
6....	58	38	23	21	22	20	18	84	225	214	68	62
7....	52	36	23	21	21	21	18	88	221	252	65	66
8....	54	29	23	21	19	21	18	86	218	203	55	55
9....	52	34	23	20	19	21	16	112	203	173	54	52
10....	49	34	25	20	19	21	17	136	196	170	52	48
11....	48	31	27	20	20	22	17	138	237	165	51	46
12....	48	32	25	20	20	21	18	130	272	168	48	45
13....	48	32	24	20	19	20	19	168	272	168	45	48
14....	44	35	23	20	20	19	25	221	272	165	45	45
15....	42	34	22	20	22	20	42	268	268	154	48	42
16....	42	37	26	20	20	20	58	305	305	130	49	42
17....	42	35	25	20	20	20	51	292	339	128	51	41
18....	41	31	24	20	19	20	39	284	348	133	68	39
19....	41	29	24	20	20	19	46	301	330	119	51	39
20....	44	29	24	20	19	19	41	288	330	108	44	37
21....	44	29	24	21	18	18	45	280	343	102	42	35
22....	42	28	24	21	18	20	62	288	339	100	39	35
23....	42	27	23	21	19	20	58	322	322	95	38	44
24....	32	24	24	21	19	16	42	322	296	93	41	45
25....	41	26	23	21	18	17	35	317	343	91	46	42
26....	41	25	23	20	18	19	48	252	444	86	45	38
27....	39	24	24	19	19	19	63	256	339	95	41	35
28....	39	23	22	19	20	18	52	313	284	93	44	34
29....	35	22	21	19	....	18	42	348	276	88	52	34
30....	38	22	22	20	....	18	36	348	301	84	60	39
31....	44	22	21	....	....	18	....	352	....	82	48	....
Total	1412	928	728	632	549	601	1016	6335	8930	4673	1656	1399
Mean.	45.5	30.9	23.5	20.4	19.6	19.4	33.9	211	298	151	53.4	46.6
Max..	58	42	27	22	22	22	63	352	444	301	79	81
Min..	32	22	21	19	18	16	16	36	196	82	38	34
Acre-ft.	2800	1840	1440	1250	1090	1190	2020	12960	17710	9270	3280	2770

Total run-off for water year 1936-37=57,620 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Williams Fork River Near Leal, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	64	48	31	24	24	23	21	146	637	754	134	88
2....	54	42	27	24	22	22	20	120	710	677	124	92
3....	51	41	28	24	22	21	22	108	902	603	130	106
4....	50	44	28	24	22	20	22	91	1120	569	120	86
5....	44	32	26	24	22	20	20	75	1120	464	113	79
6....	41	36	27	24	22	20	20	72	1130	443	99	73
7....	39	40	28	24	22	19	20	67	962	417	92	77
8....	44	32	28	23	22	20	20	62	860	381	99	102
9....	44	38	28	23	21	20	22	65	960	345	88	75
10....	45	41	29	23	24	20	22	68	880	328	81	66
11....	42	38	29	24	22	20	25	73	1070	294	81	77
12....	41	34	30	24	25	20	24	84	1120	282	84	99
13....	41	33	30	24	21	20	26	116	1000	267	95	92
14....	39	32	28	24	23	20	30	184	890	307	86	77
15....	46	40	27	24	22	20	27	224	850	286	77	70
16....	46	40	28	24	23	20	26	248	814	260	73	65
17....	46	39	27	24	23	20	25	260	915	242	66	65
18....	44	39	27	24	22	20	30	264	957	223	63	62
19....	41	39	26	24	23	20	41	264	826	205	59	59
20....	41	39	26	24	23	21	34	260	868	202	56	56
21....	46	40	25	24	23	22	31	260	1430	199	55	56
22....	46	36	27	22	22	21	33	264	1320	193	52	56
23....	46	30	26	24	21	19	41	213	1170	169	52	56
24....	48	40	26	24	20	20	51	206	1040	162	55	62
25....	49	39	25	24	22	20	67	220	915	152	66	56
26....	48	32	27	24	22	19	82	269	887	126	86	55
27....	46	25	28	23	22	20	80	359	908	157	73	51
28....	48	28	28	24	23	23	75	482	915	150	63	48
29....	46	29	28	24	....	21	89	626	929	130	65	47
30....	45	30	24	24	....	19	123	632	862	122	88	46
31....	46	....	24	23	....	20	....	576	....	130	110	....
Total	1417	1096	846	737	625	630	1169	6958	28967	9239	2585	2099
Mean.	45.7	36.5	27.3	23.8	22.3	20.3	39.0	224	966	298	83.4	70.0
Max..	64	48	31	24	25	23	123	632	1430	754	134	106
Min..	39	25	24	22	20	19	20	62	637	122	52	46
Acre-ft.	2810	2170	1680	1460	1240	1250	2320	13800	57460	18330	5130	4160

Total run-off for water year 1937-38=111,800 acre-feet.

Discharge of Williams Fork River Near Parshall, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	79	68	44	42	39	40	34	82	377	308	75	67
2....	73	67	41	39	38	40	34	82	391	264	68	70
3....	70	58	44	42	40	37	34	90	418	244	68	104
4....	68	62	48	41	41	37	34	110	409	212	62	130
5....	70	68	44	40	41	37	34	156	346	216	60	104
6....	79	68	44	40	42	39	34	166	300	209	61	104
7....	70	67	44	40	40	41	34	172	280	252	49	127
8....	70	66	44	39	37	41	34	169	288	220	40	102
9....	70	62	45	39	37	41	31	193	272	186	38	94
10....	68	58	48	39	37	41	33	232	260	169	36	86
11....	66	64	50	39	38	42	33	232	276	166	36	79
12....	66	60	49	38	38	41	36	193	342	159	42	75
13....	66	60	47	38	37	39	40	240	334	156	46	72
14....	66	66	45	39	39	37	42	296	317	172	46	68
15....	64	66	44	39	41	40	67	368	325	162	47	66
16....	66	68	49	39	38	40	104	432	334	136	51	60
17....	67	67	47	39	37	40	94	418	423	133	45	60
18....	66	60	47	39	33	40	72	377	423	136	56	60
19....	64	56	47	39	35	39	81	437	418	130	47	60
20....	72	56	47	39	35	38	79	386	395	107	42	60
21....	72	56	47	40	34	36	84	377	418	94	47	60
22....	70	54	47	41	34	40	123	317	432	86	49	60
23....	68	51	45	41	36	40	112	377	414	81	48	67
24....	58	49	46	41	36	32	77	325	373	81	51	75
25....	70	51	45	40	35	34	67	395	391	82	58	67
26....	70	49	44	38	35	36	100	300	618	73	57	64
27....	67	47	45	38	36	36	152	276	377	75	55	61
28....	67	45	42	38	38	35	136	334	296	75	60	60
29....	58	43	40	38	....	34	107	386	276	67	73	58
30....	66	43	42	39	....	34	86	423	300	64	88	60
31....	75	....	42	40	....	34	....	409	....	72	72	....
Total	2121	1755	1403	1223	1047	1181	2028	8750	10823	4587	1673	2280
Mean.	68.4	58.5	45.3	39.5	37.4	38.1	67.6	282	361	148	54.0	76.0
Max..	79	68	50	42	42	42	152	437	618	308	88	130
Min..	58	43	40	38	33	32	31	82	260	64	36	58
Acre-ft.	4210	3480	2780	2430	2080	2340	4020	17360	21470	9100	3320	4520

Total run-off for water year 1936-37=77,110 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Williams Fork River Near Parshall, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	100	50	45	36	36	37	31	334	890	785	107	170
2....	97	47	42	36	36	37	30	260	925	715	130	173
3....	82	45	43	36	37	38	32	240	995	658	120	206
4....	79	45	43	35	38	35	32	179	1060	600	107	173
5....	70	39	40	33	35	33	30	149	1040	542	107	160
6....	64	38	41	33	34	32	30	114	1080	490	114	147
7....	61	38	42	32	33	30	30	107	985	446	123	140
8....	66	*39	43	32	*34	30	33	92	930	404	136	191
9....	70	45	44	33	*37	31	35	94	880	368	131	156
10....	66	47	45	*34	39	31	42	102	960	351	123	140
11....	62	47	46	34	37	31	48	114	890	334	120	137
12....	61	48	46	34	39	31	54	136	895	325	120	156
13....	61	50	45	34	36	31	55	186	985	317	134	177
14....	58	52	43	36	35	31	60	329	910	338	134	177
15....	68	55	42	37	36	31	58	414	835	325	126	128
16....	70	56	43	37	36	32	58	451	890	304	117	117
17....	67	52	42	37	36	32	58	446	900	280	112	109
18....	72	50	40	36	35	33	62	446	940	268	106	99
19....	61	50	39	35	34	34	73	451	855	232	99	89
20....	60	51	38	34	35	34	68	456	855	216	94	84
21....	67	51	38	35	34	33	77	466	980	212	89	82
22....	62	46	39	37	32	32	85	504	1140	201	84	84
23....	61	47	38	36	31	*32	96	418	1060	162	84	80
24....	64	50	37	35	33	31	110	400	980	149	87	87
25....	62	54	36	34	35	30	130	414	945	139	117	87
26....	58	54	39	35	36	30	135	504	905	136	140	82
27....	56	45	40	36	36	31	130	595	865	149	131	80
28....	55	42	40	36	37	33	185	696	885	172	123	76
29....	52	45	40	36	....	32	240	885	845	159	117	72
30....	51	46	38	35	....	30	280	960	865	149	147	68
31....	49	....	36	35	....	29	....	860	....	133	177	....
Total	2032	1424	1273	1084	992	997	2387	11802	28170	10059	3656	3697
Mean.	65.5	47.5	41.1	35.0	35.4	32.2	79.6	381	939	324	118	123
Max..	100	56	46	37	39	38	280	960	1140	785	177	206
Min..	49	38	36	32	31	29	30	92	835	133	84	68
Acre-ft.	4030	2820	2520	2150	1970	1980	4730	23410	55870	19950	7250	7330

Total run-off for water year 1937-38=134,000 acre-feet.

*Discharge measurement.

Discharge of Blue River Below Green Mountain Reservoir Site Near Kremmling, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	245	214	134	130	100	95	150	1110	2780	2520	659	583
2....	242	207	143	130	100	95	156	926	2920	2220	636	598
3....	238	200	138	130	95	95	136	884	3280	2060	648	718
4....	234	193	135	125	95	95	138	730	3540	1940	625	694
5....	230	166	145	125	95	95	161	572	3530	1820	593	670
6....	225	161	158	130	90	95	134	552	3620	1620	572	614
7....	220	204	173	130	*86	95	110	514	3130	1440	593	598
8....	215	173	161	130	85	95	107	482	2930	1350	593	653
9....	210	173	166	130	85	95	117	468	2840	1310	604	614
10....	210	197	183	125	90	100	126	486	3160	1280	593	543
11....	210	183	190	*125	90	100	126	505	2830	1230	593	538
12....	210	176	193	120	90	100	148	588	2930	1210	583	593
13....	205	158	180	120	90	100	190	609	3340	1240	631	664
14....	205	158	166	120	85	100	210	898	2960	1220	642	593
15....	205	176	156	125	85	110	210	1230	2620	1290	604	533
16....	205	158	158	125	85	110	180	1520	2660	1260	543	491
17....	205	163	150	120	85	115	200	1500	2750	1140	491	464
18....	205	169	148	120	80	115	242	1460	2930	1080	442	433
19....	205	163	140	115	80	115	321	1510	2580	1010	420	411
20....	208	176	138	110	80	120	321	1420	2570	975	407	390
21....	215	183	120	110	80	125	288	1380	3050	919	403	378
22....	228	180	115	110	80	*135	329	1510	3620	898	390	371
23....	228	148	110	110	80	145	433	1250	3380	842	378	371
24....	224	173	115	105	80	150	500	1170	2890	793	367	363
25....	228	173	125	105	85	160	598	1210	2720	765	378	355
26....	228	148	135	105	85	160	706	1320	2580	751	446	344
27....	224	126	145	105	90	150	670	1600	2590	800	491	333
28....	224	130	145	105	90	145	625	2090	2700	807	509	317
29....	214	135	140	105	....	138	712	2720	2760	772	491	306
30....	214	140	140	105	....	124	828	2920	2830	724	524	299
31....	214	....	135	105	....	153	....	2590	....	682	593	....
Total	6773	5104	4580	3655	2441	3625	9172	37724	89020	37968	16442	14832
Mean.	218	170	148	118	87.2	117	306	1217	2967	1225	530	494
Max..	245	214	193	130	100	160	828	2920	3620	2520	659	718
Min..	205	126	110	105	80	95	107	468	2570	682	367	299
Acre-ft.	13430	10120	9080	7250	4840	7190	18190	74820	176600	75310	32610	29420

Total run-off for water year 1937-38=458,900 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Blue River at Dillon, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	68	41	22	12	12	16	38	54	240	298	105	68
2....	68	41	21	11	11	15	42	52	268	272	100	67
3....	68	39	23	11	13	19	39	52	268	236	96	70
4....	68	39	24	11	13	17	38	59	260	210	94	70
5....	68	39	21	11	17	16	38	71	248	199	90	72
6....	68	39	20	10	17	18	38	98	221	184	87	72
7....	68	35	21	11	16	19	39	105	206	181	89	71
8....	65	36	21	11	16	20	40	107	199	184	87	70
9....	65	38	21	9.2	16	20	37	108	199	188	83	70
10....	63	38	21	8.4	15	21	42	119	188	170	79	66
11....	60	38	19	8.6	15	22	45	134	181	162	73	62
12....	56	39	17	8.4	16	23	48	132	210	162	70	60
13....	56	40	15	8.6	16	26	50	128	221	170	70	59
14....	56	34	16	8.8	16	30	55	142	221	174	64	58
15....	55	30	16	9.0	16	28	59	177	221	170	63	56
16....	54	30	16	8.6	16	31	60	225	217	162	63	58
17....	54	30	17	9.8	16	18	57	240	236	138	63	56
18....	54	30	17	9.6	17	21	56	233	264	130	70	55
19....	54	30	16	9.4	17	23	53	229	289	132	77	55
20....	54	28	15	9.0	16	25	56	236	276	128	83	55
21....	54	28	15	8.8	15	27	61	221	272	119	77	56
22....	54	27	14	7.6	17	30	62	206	340	114	71	55
23....	54	24	14	8.6	17	27	72	217	325	105	68	53
24....	48	23	13	9.4	16	26	68	217	272	100	64	53
25....	44	24	13	9.0	15	30	58	202	268	99	63	52
26....	43	24	13	9.0	18	31	53	192	552	98	63	50
27....	43	24	14	10	17	29	59	167	456	99	64	48
28....	43	23	14	11	17	31	67	167	349	98	64	47
29....	42	22	13	11	....	29	66	206	302	100	64	46
30....	42	20	13	12	....	33	61	214	298	105	67	46
31....	42	....	12	13	....	36	....	217	....	107	67	....
Total	1731	953	527	304.8	439	757	1557	4927	8067	4794	2338	1776
Mean.	55.8	31.8	17.0	9.83	15.7	24.4	51.9	159	269	155	75.4	59.2
Max..	68	41	24	13	18	36	72	240	552	298	105	72
Min..	42	20	12	7.6	11	15	37	52	181	98	63	46
Acre-ft.	3430	1890	1050	605	871	1500	3090	9770	16000	9510	4640	3520

Total run-off for water year 1936-37=55,880 acre-feet.

Discharge of Blue River at Dillon Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	46	37	26	19	19	19	19	161	540	430	150	126
2....	48	37	23	18	19	21	19	170	600	395	144	140
3....	48	36	24	16	19	20	21	156	620	370	144	148
4....	45	36	26	16	20	19	22	134	646	344	146	150
5....	44	34	29	15	20	19	24	116	657	326	134	156
6....	42	33	28	14	19	20	26	99	708	315	124	150
7....	40	32	30	15	19	20	25	98	652	285	120	140
8....	39	33	28	14	*18	21	26	86	602	271	124	138
9....	39	32	27	15	21	20	25	84	574	261	128	138
10....	38	32	27	17	22	22	27	84	569	254	124	128
11....	38	31	26	*18	22	22	28	91	525	251	124	124
12....	38	32	27	18	22	21	25	101	520	248	132	128
13....	38	32	28	19	23	22	25	122	569	245	144	136
14....	37	31	27	19	21	21	28	154	569	245	154	136
15....	37	30	26	19	18	20	25	198	514	299	140	126
16....	38	30	25	18	18	22	22	239	503	281	126	118
17....	39	30	23	18	19	25	22	261	508	248	118	108
18....	40	30	21	17	18	22	23	268	536	233	108	102
19....	39	30	20	17	17	21	26	274	503	219	101	96
20....	38	31	19	16	17	19	31	278	481	211	94	91
21....	37	31	17	16	17	20	32	278	530	208	91	88
22....	37	31	14	17	18	*20	34	311	613	203	88	86
23....	37	30	15	16	17	19	42	296	602	188	84	84
24....	40	30	17	17	17	19	50	274	542	179	83	84
25....	40	30	18	18	16	19	58	264	508	174	81	83
26....	40	27	19	18	16	19	68	264	486	170	89	80
27....	40	27	20	19	17	19	84	281	476	167	99	78
28....	40	25	21	19	18	18	105	344	465	174	99	75
29....	40	27	19	19	....	19	122	450	484	174	101	72
30....	38	29	18	19	....	20	148	580	455	165	112	71
31....	38	....	18	19	....	20	....	560	....	156	122	....
Total	1238	936	706	535	527	628	1232	7076	16559	7689	3628	3381
Mean.	39.9	31.2	22.8	17.3	18.8	20.3	40.1	228	552	248	117	113
Max..	48	37	30	19	23	25	148	580	708	430	154	156
Min..	37	25	14	14	16	18	19	84	455	156	81	71
Acre-ft.	2460	1860	1400	1060	1050	1250	2440	14040	32840	15250	7200	6710

Total run-off for water year 1937-38=87,560 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Snake River at Dillon, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	12	12	12	15	16	14	14	137	172	45	14
2....	14	11	12	12	15	18	14	14	134	154	42	16
3....	14	10	12	13	16	19	13	15	132	130	37	15
4....	13	10	12	14	17	19	14	18	130	118	32	14
5....	12	11	12	15	17	19	12	27	112	114	30	14
6....	13	10	12	15	18	18	12	30	103	110	28	14
7....	13	10	12	15	16	18	11	32	93	130	26	14
8....	14	10	13	14	16	18	12	32	93	123	25	13
9....	14	10	12	14	16	19	11	48	85	110	24	13
10....	14	10	11	14	16	20	12	66	83	99	23	12
11....	14	10	12	14	16	20	12	59	103	99	22	12
12....	13	10	13	14	16	19	12	58	118	110	22	12
13....	13	10	12	15	16	16	14	86	116	106	21	11
14....	13	11	12	15	16	17	22	128	149	92	21	11
15....	13	12	13	15	16	16	45	162	172	81	21	11
16....	12	11	13	16	17	16	63	186	181	68	20	11
17....	13	11	13	16	18	16	30	178	216	61	22	11
18....	12	11	13	15	18	16	24	175	209	62	19	10
19....	12	11	12	15	19	16	27	162	167	55	16	9.5
20....	12	11	11	15	16	21	24	139	149	47	16	9.2
21....	12	11	12	15	18	10	27	130	178	40	15	9.5
22....	12	11	12	13	18	15	30	149	178	36	14	9.8
23....	12	11	13	14	18	15	20	134	156	35	15	10
24....	13	11	12	15	18	16	14	118	142	36	16	9.8
25....	12	11	12	15	18	14	18	116	223	35	16	9.2
26....	12	11	12	14	18	15	21	92	292	32	16	9.2
27....	12	11	11	15	18	15	22	93	202	39	16	8.8
28....	12	11	12	16	18	15	16	134	156	42	16	8.8
29....	12	12	13	16	....	14	14	139	149	44	17	8.8
30....	12	12	13	16	....	13	14	139	167	41	16	9.5
31....	13	....	12	16	....	15	....	156	....	55	15	....
Total	397	324	378	453	474	514	594	3029	4525	2476	684	340.1
Mean.	12.8	10.8	12.2	14.6	16.9	16.6	19.8	97.7	151	79.9	22.1	11.3
Max..	15	12	13	16	19	21	63	186	292	172	45	16
Min..	12	10	11	12	15	13	11	14	83	32	14	8.8
Acre-ft.	787	643	750	899	940	1020	1180	6010	8980	4910	1360	675

Total run-off for water year 1936-37=28,150 acre-feet.

Discharge of Snake River at Dillon, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	11	9.5	7.4	8.0	8.5	8.8	7.6	9.4	400	451	61	83
2....	10	9.2	7.8	7.8	8.5	8.5	7.4	64	478	410	59	85
3....	10	9.2	8.5	8.0	8.8	8.0	7.6	57	574	395	63	100
4....	9.8	8.5	10	7.4	8.5	8.0	7.8	39	604	385	56	96
5....	9.5	9.2	9.5	6.8	8.2	8.8	8.0	36	658	355	48	83
6....	9.2	9.2	11	7.2	7.8	8.5	7.8	32	616	300	48	82
7....	9.2	8.8	10	6.8	7.6	8.8	7.6	30	517	258	48	80
8....	9.5	8.0	10	7.4	9.2	8.6	7.6	30	484	236	47	78
9....	9.5	7.8	9.8	8.6	9.2	9.5	8.4	29	490	214	43	61
10....	9.8	8.0	9.8	8.8	9.2	9.5	10	32	506	205	42	53
11....	9.8	8.2	10	*9.0	9.5	9.0	11	39	478	196	43	61
12....	10	8.4	11	9.5	9.8	9.5	11	44	574	196	45	85
13....	9.8	8.6	10	9.5	9.0	8.8	12	61	628	190	62	78
14....	8.8	9.0	10	9.0	7.4	8.5	12	91	539	196	52	64
15....	9.2	11	10	8.8	7.8	9.5	12	118	490	190	44	61
16....	10	10	9.8	8.5	8.2	12	10	114	500	174	39	57
17....	10	10	9.5	8.5	8.0	8.8	10	112	495	167	64	52
18....	12	10	9.3	8.2	7.0	8.8	13	114	490	155	75	47
19....	13	9.5	9.2	8.2	7.2	8.2	16	112	435	141	59	44
20....	14	11	7.6	7.4	7.4	8.2	14	118	484	126	35	41
21....	12	11	6.7	7.8	7.5	8.4	13	122	652	120	33	39
22....	11	11	7.8	7.4	7.3	8.0	16	126	682	112	30	39
23....	12	8.0	8.6	8.0	7.1	7.8	26	104	652	98	25	35
24....	14	8.0	9.2	8.5	7.1	8.0	38	104	574	92	24	29
25....	16	8.5	10	8.5	6.6	8.0	61	110	544	94	23	27
26....	14	8.2	10	8.8	7.2	8.0	74	130	512	91	50	24
27....	14	7.8	9.0	8.8	7.4	7.8	50	172	506	91	44	21
28....	9.5	8.2	8.0	8.8	8.2	8.0	49	239	539	89	96	19
29....	9.2	9.0	8.0	8.5	....	8.0	57	295	586	78	75	13
30....	9.5	8.5	8.0	8.8	....	8.0	82	340	544	69	98	16
31....	9.5	....	8.5	8.5	....	7.6	....	355	....	63	104	....
Total	334.8	271.3	284.0	255.8	225.2	265.9	666.8	3463	16231	5937	1635	1653
Mean.	10.8	9.04	9.16	8.25	8.04	8.58	22.2	112	541	192	52.7	55.3
Max..	16	11	11	9.5	9.8	12	82	355	682	451	104	100
Min..	8.8	7.8	6.7	6.8	6.6	7.6	7.4	29	400	63	23	16
Acre-ft.	664	538	563	507	447	527	1320	6870	32190	11780	3240	3290

Total run-off for water year 1937-38=61,940 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Ten Mile Creek at Dillon, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	45	32	23	22	26	27	43	54	308	223	70	46
2....	43	32	23	23	27	27	43	73	299	186	67	56
3....	42	32	24	24	27	27	42	96	283	159	68	52
4....	30	33	25	25	27	27	42	135	270	145	58	58
5....	19	32	25	26	27	27	42	170	238	135	57	52
6....	12	31	24	27	26	28	43	180	220	128	58	47
7....	6.8	31	23	28	26	28	45	176	202	140	56	47
8....	6.0	30	23	29	26	29	45	223	202	145	52	45
9....	5.6	29	23	27	26	29	44	258	234	128	49	43
10....	6.0	30	23	26	26	30	47	295	223	121	47	41
11....	11	30	23	26	26	31	49	266	254	119	46	39
12....	14	30	22	26	27	32	52	250	278	135	44	37
13....	17	30	21	27	27	32	55	316	258	142	44	36
14....	19	23	22	27	28	32	57	355	258	145	44	35
15....	27	24	22	28	28	32	57	480	254	135	43	34
16....	34	25	23	28	28	31	56	450	253	112	49	34
17....	38	25	24	28	28	30	56	410	291	98	49	34
18....	38	26	24	28	28	29	53	455	287	108	68	34
19....	38	26	24	28	27	30	62	460	262	94	62	34
20....	39	26	25	26	28	31	64	396	254	87	53	34
21....	41	26	24	25	28	33	66	368	278	83	46	34
22....	39	25	23	25	29	34	94	386	334	74	46	34
23....	39	25	23	26	29	35	78	373	266	67	45	36
24....	33	24	23	26	29	35	56	334	230	66	45	40
25....	32	25	22	26	28	35	53	325	266	67	49	35
26....	32	25	23	25	28	36	56	254	420	72	48	34
27....	32	25	23	25	28	37	78	262	283	80	48	34
28....	32	24	24	25	28	38	67	329	223	83	52	31
29....	33	23	23	25	...	39	54	346	220	96	58	33
30....	33	23	22	25	...	41	51	400	246	81	58	34
31....	32	...	22	26	...	42	...	364	...	80	51	...
Total	868.4	822	718	808	766	994	1650	9239	7899	3534	1630	1183
Mean.	28.0	27.4	23.2	26.1	27.4	32.1	55.0	298	263	114	52.6	39.4
Max.	45	33	25	29	29	42	94	480	420	223	70	58
Min.	5.6	23	21	22	26	27	42	54	202	66	43	31
Acre-ft.	1720	1630	1420	1600	1520	1970	3270	18330	15670	7010	3230	2350

Total run-off for water year 1936-37=59,720 acre-feet.

Discharge of Ten Mile Creek at Dillon, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	40	37	35	22	20	21	27	260	848	423	94	94
2....	36	29	34	22	20	22	24	180	856	376	92	81
3....	36	31	33	21	20	21	24	170	1000	351	100	73
4....	35	34	34	20	21	21	23	143	1030	328	87	73
5....	34	30	34	19	20	20	22	128	1040	302	81	80
6....	32	32	34	18	19	21	23	119	968	268	89	78
7....	35	37	34	18	19	21	24	116	800	238	112	75
8....	34	32	33	18	*18	21	23	108	751	223	104	92
9....	36	34	33	19	19	22	24	104	744	220	94	78
10....	34	33	32	19	20	23	25	102	779	213	94	70
11....	32	35	31	*20	21	23	27	110	702	213	96	78
12....	32	34	31	20	21	23	28	126	800	216	102	87
13....	32	37	31	20	22	24	29	154	840	230	100	87
14....	31	41	31	20	20	23	31	264	695	227	92	72
15....	35	38	30	20	20	23	36	310	625	245	83	68
16....	33	41	29	20	20	25	30	264	653	212	78	65
17....	32	38	28	19	19	27	32	289	674	177	70	62
18....	30	38	27	18	19	26	37	342	632	174	66	59
19....	33	38	26	18	18	25	51	487	564	161	61	55
20....	37	38	25	18	18	24	54	440	577	146	66	54
21....	39	38	23	18	18	25	54	451	765	141	63	51
22....	37	38	21	18	19	*25	59	423	824	131	63	49
23....	33	37	22	18	18	25	75	310	667	124	55	49
24....	34	37	22	19	18	24	100	310	583	124	55	51
25....	36	37	23	19	18	25	128	324	557	116	63	49
26....	32	36	23	19	18	25	141	396	537	116	78	49
27....	31	35	23	20	19	26	128	481	518	124	72	47
28....	30	36	23	20	20	24	133	716	505	119	81	47
29....	31	36	23	20	...	28	159	896	524	110	81	45
30....	32	37	23	20	...	29	210	824	481	102	98	43
31....	36	...	22	20	...	29	...	772	...	98	94	...
Total	1050	1074	873	600	542	741	1781	10119	21539	6244	2564	1961
Mean.	33.9	35.8	28.2	19.4	19.4	23.9	59.4	326	718	201	82.7	65.4
Max.	40	41	35	22	22	29	210	896	1040	423	112	94
Min.	30	29	21	18	18	20	22	102	481	98	65	43
Acre-ft.	2080	2130	1730	1190	1080	1470	3530	20070	42720	12380	5090	3890

Total run-off for water year 1937-38=97,360 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roaring Fork River at Aspen, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	45	44	31	28	21	20	21	43	274	145	40	12
2....	44	43	30	25	20	21	21	45	270	134	39	11
3....	44	39	30	23	21	21	23	65	256	122	37	14
4....	45	40	31	24	22	20	22	87	228	108	32	15
5....	47	40	31	26	22	20	22	130	198	106	29	14
6....	55	37	28	27	23	21	22	162	177	108	30	13
7....	51	37	29	27	22	21	22	213	160	100	28	15
8....	56	38	29	26	21	21	22	198	160	96	25	12
9....	57	36	28	25	20	21	22	236	160	87	23	11
10....	55	39	27	25	20	22	23	281	152	78	22	9.9
11....	52	37	28	27	20	22	24	274	210	78	20	12
12....	50	38	26	24	21	22	24	246	250	112	19	13
13....	47	36	25	24	21	23	24	303	239	106	17	12
14....	46	34	26	24	23	19	29	391	239	112	17	9.9
15....	46	33	28	24	22	20	37	443	225	95	16	9.1
16....	45	34	28	24	21	21	47	464	267	70	15	9.5
17....	45	34	27	25	21	21	34	491	319	59	17	9.1
18....	45	33	26	25	21	21	40	518	319	65	19	8.7
19....	43	31	25	24	22	19	47	464	292	59	17	7.5
20....	46	31	26	25	21	20	49	375	260	52	16	6.1
21....	44	31	26	24	19	20	49	375	281	47	14	5.8
22....	43	30	27	24	19	20	65	415	288	43	13	5.8
23....	43	30	25	22	20	21	61	407	253	39	12	7.9
24....	36	31	25	22	20	20	49	335	204	39	11	9.5
25....	43	32	26	22	21	20	43	327	201	39	11	8.3
26....	44	31	27	22	20	20	48	256	267	36	9.9	7.9
27....	41	31	25	23	20	21	62	295	201	38	9.9	1.6
28....	43	31	28	23	20	21	56	375	171	47	11	2.4
29....	40	30	28	22	....	21	52	375	158	62	14	2.4
30....	43	30	28	22	....	21	43	379	155	47	22	2.7
31....	47	....	27	21	....	22	....	343	....	43	14	....
Total	1431	1041	851	748	586	643	1103	9311	6834	2372	619.8	360.0
Mean.	46.2	34.7	27.5	24.1	20.9	20.7	36.8	300	228	76.5	20.0	12.0
Max..	57	44	31	28	23	23	65	518	319	145	40	27
Min..	36	30	25	21	19	19	21	43	152	36	9.9	5.8
Acre-ft.	2840	2060	1690	1480	1160	1280	2190	18470	13560	4700	1230	714

Total run-off for water year 1936-37=51,370 acre-feet.

Discharge of Roaring Fork River at Aspen, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	36	33	20	20	22	18	21	193	532	612	66	46
2....	37	29	22	21	24	18	21	148	516	544	61	54
3....	32	29	26	22	24	18	21	142	572	520	66	55
4....	29	30	25	20	23	18	22	118	705	414	56	50
5....	26	25	25	20	22	17	22	106	684	305	51	51
6....	26	26	24	19	16	16	23	87	717	259	50	50
7....	25	32	23	18	16	16	22	84	604	228	61	50
8....	26	28	23	20	17	16	21	75	552	213	57	61
9....	27	26	21	23	20	18	22	75	520	204	51	47
10....	27	30	22	25	24	18	24	75	568	188	56	41
11....	26	29	22	24	22	17	24	72	482	175	56	49
12....	25	28	23	26	21	18	28	78	516	175	58	63
13....	25	25	23	29	18	18	33	90	717	180	50	63
14....	25	26	23	28	16	18	37	159	540	172	54	66
15....	32	28	22	*27	18	18	32	231	467	177	47	66
16....	33	25	22	26	17	18	34	312	501	152	43	61
17....	30	26	23	25	18	20	38	309	556	138	41	60
18....	31	26	22	24	16	20	47	269	650	130	40	55
19....	29	25	20	24	18	18	68	280	532	126	35	51
20....	27	26	18	25	18	20	65	252	524	118	29	49
21....	32	28	17	24	18	21	61	255	797	110	28	48
22....	29	27	18	26	18	20	68	269	954	102	26	50
23....	30	23	20	22	18	18	72	207	713	106	26	48
24....	31	28	21	20	18	22	88	222	738	92	26	46
25....	34	25	20	19	16	21	114	252	722	84	25	45
26....	35	23	18	18	16	21	132	294	738	80	25	42
27....	32	18	18	18	18	21	108	410	730	87	28	41
28....	28	21	18	19	18	22	100	520	696	100	25	40
29....	29	21	18	22	....	22	120	580	776	90	24	39
30....	29	20	19	21	....	21	165	564	734	78	24	39
31....	32	....	21	21	....	21	....	532	....	70	25	....
Total	915	786	657	696	530	588	1653	7260	19053	6029	1310	1526
Mean.	29.5	26.2	21.2	22.5	18.9	19.0	55.1	234	635	194	42.3	50.9
Max..	37	33	26	29	24	22	165	580	954	612	66	66
Min..	25	18	17	18	16	16	21	72	467	70	24	39
Acre-ft.	1810	1560	1300	1380	1050	1170	3280	14400	37790	11960	2600	3030

Total run-off for water year 1937-38=81,330 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Correction Table for Roaring Fork at Aspen, Colo., for Diversions by Twin Lakes Tunnel.
For Water Year Oct. 1, 1936, to Sept. 30, 1937.**

Month	Run-off in Acre-feet	Diversions by Twin Lakes Tunnel Acre-feet	Corrected for Diversion Acre-feet
October	2,840	.....	2,840
November	2,060	.....	2,060
December	1,690	.....	1,690
January	1,480	48	1,530
February	1,160	141	1,300
March	1,280	141	1,420
April	2,190	213	2,400
May	18,470	11,990	30,460
June	13,560	12,520	26,080
July	4,700	5,100	9,800
August	1,230	1,140	2,370
September	714	626	1,340
Total run-off for water year 1936-37.....	51,370	31,920	83,290

For Water Year Oct. 1, 1937, to Sept. 30, 1938.

October	1,810	236	2,050
November	1,560	260	1,820
December	1,300	194	1,490
January	1,380	155	1,540
February	1,050	122	1,170
March	1,170	130	1,300
April	3,280	365	3,640
May	14,400	5,040	19,440
June	37,790	23,700	61,490
July	11,960	10,340	22,300
August	2,600	2,470	5,070
September	3,030	2,450	5,480
Total run-off for water year 1937-38.....	81,330	45,460	126,800

Discharge of Roaring Fork River at Glenwood Springs, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	648	525	424	394	320	335	335	813	4400	2470	795	777
2....	640	539	384	378	320	345	362	890	3510	2410	759	734
3....	640	473	389	295	330	350	394	1230	3570	2210	734	777
4....	648	442	412	286	345	325	367	1640	3220	2070	694	768
5....	670	525	412	320	360	335	345	2120	2770	1950	655	726
6....	702	532	345	355	380	350	362	2370	2440	1930	686	726
7....	686	539	394	360	365	356	356	2540	2370	1860	632	734
8....	648	499	394	345	340	367	340	2830	2220	1760	588	710
9....	640	486	412	320	320	378	356	3600	2130	1640	581	678
10....	625	506	367	310	315	389	367	4180	2110	1560	574	655
11....	610	492	394	320	320	400	412	4240	2540	1600	560	625
12....	595	480	372	335	330	394	442	3600	3190	1840	512	602
13....	574	480	345	344	350	406	473	4100	3100	2100	473	567
14....	560	506	367	340	378	400	539	4850	2980	2240	448	546
15....	546	512	424	335	367	367	678	5400	2830	2050	430	532
16....	546	512	430	350	335	367	880	6000	3130	1760	436	525
17....	539	499	418	380	345	384	900	5570	3850	1630	486	525
18....	532	492	394	385	335	378	768	6110	4160	1660	588	486
19....	518	466	350	370	372	378	831	5810	4160	1560	655	466
20....	560	460	362	380	350	330	840	4870	3720	1340	546	442
21....	560	454	378	355	310	345	910	4750	4180	1180	499	436
22....	553	454	400	315	356	350	1130	5000	4360	1050	473	448
23....	546	436	345	335	350	372	1140	5250	4160	962	454	506
24....	532	400	345	350	345	350	920	4360	3620	880	442	610
25....	518	406	378	335	350	330	813	4180	3330	831	436	574
26....	518	412	389	330	356	340	850	3390	3510	813	436	539
27....	518	394	330	340	350	340	1120	3350	3120	777	448	539
28....	518	400	384	355	340	315	1090	4300	2780	759	581	546
29....	506	394	378	360	....	330	962	4920	2670	1050	742	560
30....	499	389	372	355	....	315	850	5310	2590	962	860	618
31....	546	....	345	345	....	335	....	4400	....	840	870	....
Total	17941	14104	11833	10677	9634	11056	20132	121973	96720	47744	18073	17977
Mean..	579	470	382	344	344	357	671	3935	3224	1540	583	599
Max..	702	539	430	394	380	406	1140	6110	4400	2470	870	777
Min..	499	389	330	286	310	315	335	813	2110	759	430	436
Acre-ft.	35590	27970	23470	21180	19110	21930	39930	241900	191800	94700	35850	35660

Total run-off for water year 1936-37=789,100 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roaring Fork River at Glenwood Springs, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	632	546	389	436	350	372	367	3900	7280	5910	1500	892
2....	640	539	412	466	345	384	340	2890	7180	5540	1470	1040
3....	610	532	473	492	330	492	367	2540	7960	5340	1420	1240
4....	595	525	448	406	335	546	367	3750	8890	4960	1330	1180
5....	567	499	430	372	325	394	394	1940	8840	4540	1250	1120
6....	546	473	442	367	290	362	454	1680	9200	4090	1170	1050
7....	532	553	454	335	286	350	389	1520	8430	3730	1270	1070
8....	532	574	436	378	350	340	367	1360	7660	3550	1240	1330
9....	539	506	424	406	320	362	378	1330	7000	3410	1240	1160
10....	539	525	442	400	330	356	406	1320	7400	3320	1220	1050
11....	532	525	436	400	320	356	412	1370	6730	3160	1180	1100
12....	525	499	454	372	362	378	454	1680	7130	3060	1160	1300
13....	512	486	466	372	315	418	525	1810	9280	3500	1220	1400
14....	506	486	473	356	290	430	618	2720	7930	3160	1290	1220
15....	670	492	442	378	340	389	618	3710	6730	3200	1250	1110
16....	718	480	436	378	310	372	595	4600	6900	2900	1120	1040
17....	655	486	424	367	315	406	640	4580	6050	2680	1040	984
18....	710	492	424	372	277	400	742	4070	7730	2540	984	928
19....	648	486	384	362	277	378	1040	4070	6860	2490	901	892
20....	602	492	362	356	335	400	1260	3860	6660	2380	840	865
21....	574	512	300	350	315	454	1180	3570	8660	2310	806	856
22....	567	518	325	325	305	400	1390	3750	11000	2160	756	856
23....	574	473	430	356	300	378	1620	3250	8580	1960	732	814
24....	574	473	473	335	300	400	2050	3230	7760	1870	708	797
25....	588	473	454	335	277	400	2430	3550	7260	1770	685	780
26....	588	448	430	350	290	389	2750	4140	7030	1710	678	748
27....	581	406	442	325	315	372	2340	5000	6050	1780	685	700
28....	574	448	430	345	320	384	2240	6240	6030	1760	685	655
29....	567	460	418	372	....	400	2560	7930	5540	1760	678	625
30....	553	400	448	362	....	378	3170	7900	5700	1690	670	611
31....	553	....	460	320	....	340	....	6930	....	1590	692	....
Total	18103	14807	13261	11546	8824	12180	32463	110190	228450	93820	31870	29413
Mean.	584	494	428	372	315	393	1082	3555	7515	3026	1028	980
Max.	718	574	473	492	362	546	3170	7930	11000	5910	1500	1400
Min.	506	400	300	320	277	340	340	1320	5540	1590	670	611
Acre-ft.	35910	29370	26300	22900	17500	24160	64390	218600	447200	186100	63210	58340

Total run-off for water year 1937-38=1,194,000 acre-feet.

Discharge of Crystal River Near Redstone, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	112	102	78	76	70	72	76	274	1290	1000	255	201
2....	110	99	74	74	70	74	80	328	1320	910	249	188
3....	109	80	73	70	70	74	86	444	1330	803	244	181
4....	109	80	76	58	74	76	87	584	1150	720	227	260
5....	110	96	77	60	76	72	80	820	883	654	221	298
6....	121	94	61	68	78	78	81	960	705	634	238	238
7....	114	94	70	70	78	80	86	970	640	602	219	216
8....	110	86	74	68	74	82	78	1030	647	540	191	172
9....	109	87	78	62	72	84	80	1390	752	521	179	148
10....	106	94	67	58	72	86	87	1710	856	488	181	136
11....	104	92	74	58	76	88	99	1510	1230	502	160	128
12....	104	88	67	60	80	90	109	1360	1340	614	148	128
13....	102	88	62	62	82	90	121	1570	1360	856	146	123
14....	104	87	64	62	86	81	152	1500	1310	803	142	121
15....	102	90	68	60	86	81	224	1470	1280	675	146	125
16....	99	92	78	64	86	82	292	1500	1430	556	179	132
17....	96	92	76	68	83	87	277	1470	1590	492	203	128
18....	94	92	72	68	80	86	252	1770	1610	474	235	121
19....	98	88	66	66	84	84	263	1600	1500	401	201	121
20....	123	82	70	68	82	76	263	1480	1480	366	169	121
21....	116	82	74	66	76	77	319	1630	1540	334	148	119
22....	107	81	76	64	80	77	372	1570	1630	313	138	119
23....	102	78	66	66	84	87	331	1650	1500	292	128	148
24....	99	73	66	70	84	82	277	1380	1400	277	117	179
25....	94	72	74	68	80	77	252	1330	1320	286	110	146
26....	93	73	76	66	78	77	307	1150	1250	304	107	136
27....	94	67	64	66	74	76	397	1180	1170	277	132	128
28....	93	66	72	72	72	71	350	1350	1090	298	227	125
29....	88	69	74	74	....	78	249	1600	1070	334	235	126
30....	90	73	70	74	....	74	224	1530	1010	301	255	130
31....	102	....	68	72	....	76	....	1350	....	272	224	....
Total	3214	2537	2205	2058	2187	2475	5951	39460	36683	15899	5754	4644
Mean.	104	84.6	71.1	66.4	78.1	79.8	198	1273	1223	513	186	155
Max.	123	102	78	76	86	90	397	1770	1630	1000	255	298
Min.	88	66	61	58	70	71	76	274	640	272	107	119
Acre-ft.	6370	5030	4370	4080	4340	4910	11800	78270	72760	31540	11410	9210

Total run-off for water year 1936-37=24,100 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Crystal River Near Redstone, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	123	116	80	74	72	68	82	1000	2350	2130	472	260
2....	116	110	80	80	67	72	84	829	2200	2070	452	302
3....	112	105	85	84	67	116	84	684	2300	2080	460	308
4....	105	99	80	79	64	116	86	575	2350	1920	428	266
5....	103	88	79	75	62	90	103	530	2270	1770	408	245
6....	97	88	77	75	58	77	114	480	2190	1580	384	224
7....	95	116	75	70	64	77	97	448	2180	1400	412	245
8....	92	116	74	68	74	77	90	428	1960	1310	388	320
9....	90	112	77	65	65	80	90	420	1820	1300	374	248
10....	92	116	77	65	72	77	103	440	1820	1240	371	224
11....	88	114	79	64	79	75	107	484	1640	1220	344	266
12....	86	105	95	62	84	86	132	570	1960	1210	317	347
13....	82	101	99	68	67	92	162	692	2400	1410	332	362
14....	77	92	92	72	74	90	178	1040	1820	1230	350	296
15....	135	90	86	79	74	80	162	1320	1490	1180	317	263
16....	128	86	88	80	67	77	158	1480	1730	1020	257	233
17....	110	88	84	79	72	82	183	1360	1960	937	216	199
18....	130	86	88	79	60	77	219	1190	2000	883	208	186
19....	116	82	90	79	64	74	314	1180	1760	847	205	175
20....	107	82	80	75	68	77	344	1050	1790	756	191	165
21....	107	88	80	68	64	90	377	910	2780	708	165	162
22....	105	84	75	72	59	84	365	901	3390	618	188	158
23....	110	74	80	74	59	88	400	812	2330	580	183	150
24....	114	79	82	73	53	92	428	874	2740	545	186	145
25....	125	74	85	72	50	86	520	1020	2580	510	188	135
26....	123	70	80	72	54	86	648	1230	2530	555	188	130
27....	118	65	80	72	56	82	606	1620	2480	590	191	128
28....	116	80	74	74	62	92	642	1860	2600	525	178	125
29....	114	85	74	74	....	95	865	2390	2690	520	168	121
30....	116	85	82	72	....	90	937	2440	2420	488	160	116
31....	114	....	82	72	....	80	....	2450	....	456	191	....
Total	3346	2776	2539	2267	1831	2625	8680	32707	66530	33588	8872	6504
Mean..	108	92.5	81.9	73.1	65.4	84.7	289	1055	2218	1083	286	217
Max..	135	116	99	84	84	116	937	2450	3390	2130	472	362
Min..	77	65	74	62	50	68	82	420	1490	456	160	116
Acre-ft.	6640	5510	5040	4500	3630	5210	17220	64870	132000	66620	17600	12900

Total run-off for water year 1937-38=341,700 acre-feet.

Discharge of Willow Creek Near Raven, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0	0	....	....	....	....	....	18	27	3.2	.3	.5
2....	0	0	....	....	....	....	....	30	22	3.1	.3	.3
3....	0	0	....	....	....	....	....	31	24	2.9	.3	.3
4....	0	0	....	....	....	....	....	42	27	2.3	.3	.3
5....	0	0	....	....	....	....	....	45	25	1.8	.2	.2
6....	0	0	....	....	....	....	....	50	21	1.3	.2	.2
7....	0	0	....	....	....	....	....	63	18	2.0	.2	.2
8....	0	....	....	....	....	....	....	79	16	2.6	.2	.2
9....	0	....	....	....	....	....	....	88	15	5.3	.2	.1
10....	0	....	....	....	....	....	....	100	13	7.1	.2	.1
11....	0	....	....	....	....	....	....	90	12	5.7	.2	.1
12....	0	....	....	....	....	....	....	89	12	4.6	.1	.1
13....	0	....	....	....	....	....	....	87	11	8.1	.1	0
14....	0	....	....	....	....	....	....	90	11	5.3	.1	0
15....	0	....	....	....	....	....	....	106	10	2.9	.1	0
16....	0	....	....	....	....	....	....	90	9.3	2.5	.1	0
17....	0	....	....	....	....	....	....	79	8.3	2.2	.2	0
18....	0	....	....	....	....	....	....	71	7.4	2.0	.7	0
19....	0	....	....	....	....	....	....	60	7.1	1.6	.1	0
20....	0	....	....	....	....	....	....	53	6.4	1.5	.1	0
21....	0	....	....	....	....	....	....	49	6.2	1.0	.1	0
22....	0	....	....	....	....	....	....	45	5.5	.8	0	0
23....	0	....	....	....	....	....	....	40	4.9	.8	0	0
24....	0	....	....	....	....	....	....	37	4.4	.8	0	0
25....	0	....	....	....	....	....	....	37	4.9	.5	.1	0
26....	0	....	....	....	....	....	....	34	6.0	.5	0	0
27....	0	....	....	....	....	....	....	30	5.1	.5	0	0
28....	0	....	....	....	....	....	....	28	3.9	.5	.1	0
29....	0	....	....	....	....	....	....	34	3.6	.9	.2	.1
30....	0	Nov. 1	....	....	....	....	....	36	4.2	2.3	.5	.2
31....	0	to 7	....	....	....	....	....	31	....	1.8	.4	....
Total	0	0	....	....	....	....	....	1762	351.2	78.4	5.6	2.9
Mean..	0	0	....	....	....	....	....	56.8	11.7	2.53	0.18	0.10
Max..	0	0	....	....	....	....	....	106	27	8.1	0.7	0.5
Min..	0	0	....	....	....	....	....	18	3.6	0.5	0	0
Acre-ft.	0	0	....	....	....	....	....	3490	697	156	11	5.8

Total run-off for period=4,360 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Willow Creek Near Raven, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0.5	1.7	....	....	....	....	....	116	74	6.2	0	2.3
2....	.4	1.7	....	....	....	....	....	85	70	5.6	0	1.7
3....	.3	1.5	....	....	....	....	....	77	63	4.9	0	2.2
4....	.4	1.7	....	....	....	....	....	66	58	4.2	0	2.2
5....	.4	2.1	....	....	....	....	....	67	53	3.6	0	2.2
6....	.4	2.2	....	....	....	....	....	55	48	3.7	0	1.6
7....	.5	2.1	....	....	....	....	....	50	41	3.6	0	1.9
8....	.5	....	....	....	....	....	....	49	39	3.0	0	2.1
9....	.4	....	....	....	....	....	....	47	35	3.0	.2	1.6
10....	.4	....	....	....	....	....	....	57	35	2.9	.8	1.7
11....	.6	....	....	....	....	....	....	78	34	2.7	.4	2.1
12....	.7	....	....	....	....	....	....	92	26	2.5	0	4.8
13....	.7	....	....	....	....	....	....	123	34	2.4	.4	7.2
14....	1.8	....	....	....	....	....	....	150	24	3.1	.5	5.0
15....	1.7	....	....	....	....	....	Apr. 17	165	20	2.8	.2	4.0
16....	2.0	....	....	....	....	....	to 30	175	19	2.1	0	3.2
17....	2.0	....	....	....	....	....	7.0	160	16	2.0	0	2.4
18....	2.7	....	....	....	....	....	10	140	14	1.9	0	2.1
19....	1.8	....	....	....	....	....	17	130	12	1.4	0	1.7
20....	1.8	....	....	....	....	....	20	125	11	1.1	0	1.5
21....	1.7	....	....	....	....	....	21	115	11	1.6	0	1.3
22....	1.7	....	....	....	....	....	29	110	13	1.4	0	1.8
23....	1.8	....	....	....	....	....	47	108	12	1.2	0	1.7
24....	1.9	....	....	....	....	....	63	110	13	.7	0	1.5
25....	1.7	....	....	....	....	....	82	115	9.0	.4	0	1.7
26....	1.6	....	....	....	....	....	70	122	7.9	.4	0	1.8
27....	1.8	....	....	....	....	....	71	126	7.5	1.1	0	1.4
28....	1.8	....	....	....	....	....	84	122	7.4	1.2	0	1.2
29....	1.9	....	....	....	....	....	98	109	9.9	.8	0	1.1
30....	1.7	Nov. 1	....	....	....	....	129	93	8.3	.2	0	1.0
31....	1.7	to 7	....	....	....	....	....	84	....	0	1.2	....
Total	39.3	13.0	....	....	....	....	748.0	3221	825.0	71.7	3.7	66.0
Mean.	1.27	1.86	....	....	....	....	53.4	104	27.5	2.31	.12	2.20
Max....	2.7	2.2	....	....	....	....	129	175	74	6.2	1.2	7.2
Min....	.3	1.5	....	....	....	....	7.0	47	7.4	0	0	.7
Acre-ft.	78	26	....	....	....	....	1480	6390	1640	142	7.3	131

Total run-off for period=9,894.3 acre-feet.

Discharge of Roan Creek at Simmons Ranch Near Highmore, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0	....	....	....	....	....	7.3	45	34	4.6	1.6	1.2
2....	8.4	47	36	4.1	1.5	2.3
3....	9.3	53	41	3.6	1.5	1.5
4....	8.7	61	34	2.9	1.4	1.5
5....	9.6	71	37	2.7	1.0	1.4
6....	10	77	34	2.3	1.0	1.4
7....	11	78	27	8.7	1.4	1.5
8....	12	88	25	7.0	1.5	1.6
9....	11	99	23	7.0	1.5	1.2
10....	13	127	19	7.3	1.8	1.0
11....	17	129	16	7.0	1.4	1.0
12....	Mar. 14	18	115	15	9.0	1.4	1.0
13....	to 31	20	110	14	11	1.3	.8
14....	3.4	25	109	11	15	1.4	.8
15....	3.4	34	106	10	11	1.1	.8
16....	4.6	43	109	9.6	9.6	2.7	.8
17....	5.9	44	109	9.0	10	1.3	.6
18....	5.4	42	113	9.0	5.9	.9	.7
19....	4.6	42	104	8.4	5.1	.4	.7
20....	4.6	41	93	8.7	4.8	.3	.7
21....	4.8	44	84	8.4	4.8	.3	.8
22....	5.4	48	78	8.1	5.1	.2	.9
23....	5.9	47	70	7.3	6.7	.2	1.1
24....	*0.1	....	....	....	....	5.6	46	62	7.0	9.6	.3	.9
25....	5.4	45	55	7.0	12	.3	.7
26....	5.4	46	49	7.3	11	.2	.7
27....	5.9	47	44	6.1	13	.2	.8
28....	6.1	46	41	5.4	9.6	.4	.7
29....	6.7	46	41	4.6	4.8	1.0	.6
30....	6.7	45	42	5.9	4.3	.9	.7
31....	7.0	....	39	....	4.6	....	....
Total	96.8	886.3	2448	487.8	224.1	31.4	30.2
Mean.	0.5	....	....	....	....	5.38	29.5	79.0	16.3	7.23	1.01	1.01
Max....	7.0	48	129	41	15	2.7	2.3
Min....	3.4	7.3	39	4.6	2.3	.2	.6
Acre-ft.	3.2	....	....	....	....	192	1760	4860	968	444	62	60

Total run-off for period=8,349 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Carr Creek at Altenbern Ranch Near Highmore, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0.7	1.1	0.1	....	....	....	0.8	8.4	38	7.2	2.8	0.6
2....	.6	1.0	....	....	....	....	.8	12	34	6.6	2.5	.9
3....	.8	1.1	....	....	....	....	.7	24	36	6.6	2.0	.9
4....	.9	1.3	....	....	....	....	.4	40	39	6.3	1.8	.9
5....	.8	1.1	....	....	....	....	.6	62	39	6.3	1.6	.6
6....	.8	1.1	....	....	....	Mar. 8	.6	75	32	13	1.6	.6
7....	.9	1.4	....	....	....	to 31	.8	95	27	34	2.0	.6
8....	.8	1.3	....	....	....	1.0	.8	102	25	32	2.0	.6
9....	.8	1.2	....	....	....	1.9	.8	120	22	42	1.4	1.3
10....	.8	1.3	....	....	....	3.1	1.1	132	19	73	1.4	1.0
11....	.8	1.3	....	....	....	4.1	1.1	118	17	20	1.3	.9
12....	.6	1.3	....	....	....	4.4	1.2	98	17	17	1.2	.9
13....	.6	.8	....	....	....	4.8	1.1	95	15	17	1.2	.8
14....	.6	.3	....	....	....	5.2	1.2	84	13	17	1.3	.8
15....	.5	.3	....	....	....	3.4	1.5	86	12	16	1.0	.8
16....	.4	.3	....	....	....	4.1	2.0	86	11	14	.8	.9
17....	.3	.3	....	....	....	6.2	2.9	99	9.3	13	1.4	.9
18....	.4	.3	....	....	....	6.9	2.7	126	8.6	13	1.6	.8
19....	.4	.3	....	....	....	7.4	2.7	104	7.9	7.6	1.3	.8
20....	.6	.2	....	....	....	6.9	2.4	103	7.9	7.6	1.0	.7
21....	.7	.2	....	....	....	5.8	2.9	107	6.9	6.3	1.0	.7
22....	.6	.2	....	....	....	4.8	4.1	100	6.9	5.6	.9	.9
23....	.4	.2	....	....	....	4.1	4.4	94	7.2	5.0	.9	1.4
24....	.4	.1	....	....	....	3.1	4.4	83	6.6	5.0	.9	1.4
25....	.4	.1	....	....	....	2.4	4.8	82	6.6	4.5	1.0	1.0
26....	.4	.1	....	....	....	1.6	5.8	75	8.6	4.0	1.0	.9
27....	.4	.1	....	....	....	1.1	6.2	68	7.6	3.8	1.3	.9
28....	.5	.1	....	....	....	.9	8.4	44	6.3	4.0	1.3	.9
29....	.6	.1	....	....	....	.8	9.4	46	6.6	3.8	1.0	.9
30....	.8	.1	....	....	....	.8	8.4	39	7.2	3.5	.7	1.2
31....	1.1	....	....	....	....	.7	....	39	....	3.5	.8	....
Total	19.4	18.6	....	....	....	85.5	85.0	2446.4	500.2	418.2	42.0	26.5
Mean	.63	.62	....	....	....	3.56	2.83	78.9	16.7	13.5	1.35	.88
Max..	1.1	1.4	....	....	....	7.4	9.4	132	39	73	2.8	1.4
Min..	.3	.1	....	....	....	.7	.4	8.4	6.3	3.5	.7	.6
Acre-ft.	38	37	....	....	....	170	169	4850	992	829	83	53

Total run-off for period=7,221 acre-feet.

Discharge of Plateau Creek Near Collbran, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	8.9	13	....	....	6.4	7.8	10	62	438	106	18	15
2....	8.6	13	....	....	6.2	7.8	12	73	420	72	18	14
3....	8.2	14	....	....	6.4	8.2	11	126	420	57	17	15
4....	7.8	13	....	....	6.6	8.2	10	187	322	52	15	17
5....	8.6	13	....	....	6.8	8.2	10	277	258	58	17	17
6....	11	14	....	....	7.2	8.6	10	298	184	42	23	13
7....	8.9	15	....	....	7.4	8.9	10	310	178	38	25	13
8....	7.6	13	....	....	7.0	8.9	12	398	187	36	22	10
9....	7.3	14	....	....	6.8	9.3	14	552	181	106	21	10
10....	6.8	14	....	....	7.2	9.3	16	684	175	62	19	8.9
11....	6.4	14	....	....	7.2	9.7	19	684	202	84	18	8.9
12....	6.6	15	....	....	7.4	9.7	23	707	212	154	17	8.6
13....	6.8	14	....	....	7.4	9.7	25	821	181	181	17	7.3
14....	6.4	12	....	....	7.6	9.7	33	860	170	110	16	7.6
15....	7.1	12	....	....	7.8	9.7	55	1000	165	67	15	8.6
16....	7.1	12	....	....	8.0	9.7	70	1000	167	48	19	8.6
17....	6.8	12	....	....	7.8	10	67	1260	187	52	42	8.2
18....	6.8	9.7	....	....	7.6	10	55	1100	196	82	29	7.8
19....	7.6	13	....	....	7.6	10	61	1050	178	51	18	7.6
20....	15	15	....	....	7.8	16	72	888	167	38	14	7.3
21....	13	14	....	....	7.6	14	100	888	178	34	8.6	7.1
22....	11	14	....	....	7.8	9.7	131	874	167	30	9.3	7.3
23....	9.3	15	....	....	7.8	10	114	730	159	26	9.0	15
24....	5.9	8.6	....	....	7.8	12	93	594	144	24	9.0	18
25....	12	8.6	....	....	8.2	12	84	501	152	24	8.5	12
26....	11	8.6	....	....	8.6	9.7	100	483	152	23	8.0	9.7
27....	8.6	8.6	....	....	8.2	9.3	118	638	135	22	9.0	9.3
28....	8.6	8.6	....	....	7.8	12	108	615	110	21	33	8.9
29....	7.8	8.6	....	....	....	12	95	604	91	36	22	12
30....	11	8.6	....	....	....	11	72	730	118	24	30	25
31....	14	....	....	....	....	11	....	552	....	21	21	....
Total	272.5	367.9	279	248	208.0	312.1	1610	19546	5994	1781	567.4	337.7
Mean	8.79	12.3	9.0	8.0	7.43	10.1	53.7	631	200	57.5	18.3	11.3
Max..	15	15	....	....	8.6	16	131	1260	438	181	42	25
Min..	5.9	8.6	....	....	6.2	7.8	10	62	91	21	8.0	7.1
Acre-ft.	540	730	553	492	413	619	3190	38770	11890	3530	1130	670

Total run-off for water year 1936-37=62,530 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Plateau Creek Near Collbran, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	21	18	16	14	14	13	18	650	1420	273	18	19
2....	17	17	15	14	15	14	17	420	1340	245	18	35
3....	14	17	16	14	14	17	17	298	1200	222	18	50
4....	13	17	17	13	16	17	18	235	1240	193	18	44
5....	12	13	18	13	15	16	20	208	1240	172	22	22
6....	12	14	17	13	12	17	20	177	1200	152	22	19
7....	12	18	16	13	13	16	20	145	970	133	24	20
8....	12	14	16	14	14	16	20	132	876	115	24	26
9....	11	19	18	13	14	16	19	132	876	101	25	23
10....	11	20	15	13	18	16	20	129	804	90	24	20
11....	12	20	14	13	16	15	22	134	828	85	24	71
12....	12	20	17	13	16	16	26	162	804	81	23	79
13....	12	19	17	13	*16	17	35	356	1010	86	30	72
14....	12	19	16	12	15	16	44	684	750	112	31	40
15....	39	16	16	13	14	17	38	916	592	110	30	25
16....	33	15	15	12	14	17	35	1060	511	66	21	21
17....	23	16	15	12	15	18	44	1020	504	53	19	19
18....	30	15	15	*14	15	18	62	834	476	47	18	17
19....	21	17	15	13	15	18	103	718	455	42	18	16
20....	18	17	13	12	14	19	129	520	455	37	17	16
21....	19	17	13	12	14	20	145	420	700	36	18	17
22....	18	16	13	13	14	20	180	396	616	32	17	19
23....	21	16	14	13	14	20	284	364	497	29	18	24
24....	22	17	18	13	13	19	372	501	437	27	19	19
25....	21	16	15	12	14	20	438	718	370	25	18	15
26....	20	14	15	12	14	20	404	972	332	30	18	14
27....	19	13	15	13	13	19	340	1270	318	43	17	14
28....	18	15	14	14	13	20	372	1340	309	33	15	13
29....	18	16	14	14	....	20	501	1520	395	23	17	12
30....	17	16	14	13	....	18	684	1360	327	20	17	13
31....	17	....	14	13	....	18	....	1420	....	20	22	....
Total	557	497	474	403	404	543	4447	19211	21852	2733	640	814
Mean.	18.0	16.6	15.3	13.0	14.4	17.5	148	620	728	88.2	20.6	27.1
Max..	39	20	18	14	18	20	684	1520	1420	273	31	79
Min..	11	13	13	12	12	13	17	129	309	20	15	12
Acre-ft.	1100	986	940	799	801	1080	8820	38100	43340	5420	1270	1610

Total run-off for water year 1937-38=104,300 acre-feet.

*Discharge measurement.

Discharge of Plateau Creek Near Cameo, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	39	68	54	68	41	69	62	184	513	166	39	49
2....	39	92	57	62	36	68	71	226	519	118	36	66
3....	40	66	54	53	36	61	75	328	458	95	34	52
4....	41	61	43	57	36	52	73	448	408	82	33	49
5....	43	73	36	61	37	59	66	600	362	80	32	46
6....	49	77	31	64	40	68	73	696	300	71	32	50
7....	52	77	31	61	61	78	71	684	262	61	36	61
8....	52	73	36	58	47	78	59	804	251	99	33	54
9....	49	71	40	53	40	80	69	972	248	186	31	50
10....	49	71	44	51	40	71	75	1140	230	176	27	47
11....	47	71	48	54	40	84	97	1190	255	138	26	41
12....	49	73	51	56	46	84	116	1110	258	262	26	43
13....	47	62	53	58	41	109	120	1180	233	496	25	40
14....	47	66	55	59	40	92	143	1220	220	304	23	44
15....	47	66	54	52	48	71	200	1330	207	176	23	47
16....	47	64	57	48	47	80	332	1500	207	136	64	46
17....	46	62	65	54	52	86	262	1430	216	120	49	44
18....	43	62	68	52	50	86	159	1410	237	145	40	41
19....	47	57	69	58	59	82	220	1290	223	127	33	37
20....	57	56	76	60	55	57	197	1030	210	88	29	37
21....	62	57	72	44	50	80	230	1030	216	75	28	37
22....	59	57	74	34	55	77	394	996	204	61	27	40
23....	57	56	75	32	60	77	353	852	186	49	26	36
24....	56	50	77	32	65	59	240	756	184	41	27	37
25....	56	54	79	40	72	64	189	624	168	37	28	37
26....	57	57	80	52	67	69	216	513	194	33	31	37
27....	57	57	81	44	62	78	344	606	176	34	33	43
28....	57	56	82	41	64	59	300	696	143	43	66	43
29....	57	56	79	47	....	66	255	606	124	57	129	44
30....	59	56	76	54	....	57	207	864	116	47	82	49
31....	66	....	72	54	....	69	....	648	....	46	56	....
Total	1573	1924	1869	1613	1387	2270	5268	26963	7528	3649	1204	1353
Mean.	50.7	64.1	60.3	52.0	49.5	73.2	176	870	251	118	38.8	45.1
Max..	66	92	82	68	72	109	394	1500	519	496	129	66
Min..	39	50	31	32	36	52	59	184	116	33	23	36
Acre-ft.	3120	3820	3710	3200	2750	4500	10450	53480	14930	7240	2390	2680

Total run-off for water year 1936-37=112,300 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Plateau Creek Near Cameo, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	57	78	68	70	70	105	114	1710	1830	458	56	71
2....	54	75	71	72	74	90	103	1060	1800	375	54	101
3....	54	75	78	76	74	176	116	864	1980	328	54	394
4....	54	75	77	76	76	147	112	654	2000	285	50	191
5....	54	77	68	72	78	127	138	612	1980	255	47	145
6....	56	82	77	68	70	93	171	530	1870	213	49	124
7....	56	122	80	66	62	92	134	490	1550	191	64	114
8....	56	97	78	70	64	84	134	422	1290	178	93	118
9....	56	75	78	72	68	88	136	418	1240	161	66	116
10....	56	78	80	72	80	86	150	413	1240	145	80	116
11....	61	77	82	78	107	84	152	490	1200	136	61	184
12....	64	75	99	76	124	127	186	672	1200	131	61	289
13....	64	75	143	80	80	120	223	858	1660	127	68	273
14....	64	73	95	80	78	124	320	1350	1330	134	78	184
15....	204	75	80	78	80	127	340	1720	942	154	69	154
16....	143	69	93	76	73	105	258	1960	810	127	66	138
17....	109	71	93	76	71	114	292	1910	708	107	62	131
18....	156	73	99	*75	64	109	332	1570	702	90	61	122
19....	112	71	66	72	70	95	525	1530	642	84	59	118
20....	95	73	61	70	74	105	612	1260	636	75	57	112
21....	93	78	64	70	74	124	577	1090	918	71	52	107
22....	90	80	73	70	74	101	768	1070	1210	71	54	107
23....	109	75	86	68	72	101	900	930	822	64	54	107
24....	99	77	82	68	68	109	1090	1040	750	59	56	107
25....	90	73	64	65	62	120	1290	1280	600	57	54	99
26....	88	69	66	66	58	122	1350	1480	519	56	54	93
27....	82	61	66	70	54	114	906	1760	474	59	57	93
28....	80	73	66	74	80	129	1030	2040	463	68	59	88
29....	78	73	68	70	....	147	1240	2160	554	62	61	86
30....	84	69	70	68	....	118	1500	1970	600	61	66	82
31....	84	72	70	70	....	107	....	1830	....	56	64	....
Total	2602	2294	2443	2234	2079	3490	15199	37143	33520	4438	1886	4164
Mean.	83.9	76.5	78.8	72.1	74.2	113	507	1198	1117	143	60.8	139
Max..	204	122	143	80	124	176	1500	2160	2000	458	93	394
Min..	54	61	61	65	54	84	103	413	463	56	47	71
Acre-ft.	5160	4550	4850	4430	4120	6920	30150	73670	66490	8800	3740	8260

Total run-off for water year 1937-38=221,100 acre-feet.

*Discharge measurement.

Discharge of Buzzard Creek Near Heiberger, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0	....	....	....	....	....	6	66	84	32	1.0	1.0
2....	0.2	....	....	....	....	....	7	104	75	15	.1	0.7
3....	0.3	....	....	....	....	....	8	169	75	11	0	0.8
4....	0.3	....	....	....	....	....	7	217	76	8.1	0	3.6
5....	0.7	....	....	....	....	....	6	277	67	9.2	0	4.2
6....	0.7	....	....	....	....	....	8	304	59	7.5	.2	2.3
7....	0.7	....	....	....	....	....	8	322	50	16	.8	1.5
8....	0.9	....	....	....	....	....	9	373	44	15	.9	1.0
9....	0.5	....	....	....	....	....	8	402	37	28	.5	.8
10....	0.5	....	....	....	....	....	12	360	36	36	.1	.4
11....	0.5	....	....	....	....	....	14	322	34	32	.1	.2
12....	0.7	....	....	....	....	....	22	289	32	29	0	.1
13....	0.5	....	....	....	....	....	26	280	30	43	0	0
14....	0.5	....	....	....	....	....	36	280	29	34	0	0
15....	0.9	....	....	....	....	....	50	310	26	15	0	0
16....	0.9	....	....	....	....	....	65	292	20	13	0	0
17....	0.9	....	....	....	....	....	95	256	21	9.2	.2	0
18....	0.9	....	....	....	....	....	95	241	21	13	1.4	0
19....	0.9	*1.2	....	....	....	....	80	208	19	11	1.8	0
20....	2.0	....	....	....	....	....	85	151	18	9.2	.8	0
21....	2.8	....	....	....	....	....	120	140	17	4.5	.4	0
22....	2.6	....	....	....	....	....	151	134	17	3.1	.2	.1
23....	2.6	....	....	....	....	....	92	125	15	2.5	0	.1
24....	2.5	....	....	....	....	....	59	119	13	2.0	0	.1
25....	2.0	....	....	....	....	....	51	108	12	1.8	0	.1
26....	2.0	....	....	....	....	....	78	90	16	1.6	0	.1
27....	1.9	....	....	....	....	....	111	83	18	1.4	0	.1
28....	1.8	....	....	....	....	....	84	82	13	.9	0.1	.1
29....	1.8	....	....	....	....	....	61	95	9.8	1.2	5.0	.1
30....	2.4	....	....	....	....	....	51	136	33	2.5	8.5	.1
31....	3.5	....	....	....	....	....	....	104	....	2.5	4.5	....
Total	39.4	....	....	....	....	....	1505	6439	1016.8	410.2	26.6	17.5
Mean.	1.27	1.4	....	....	....	....	50.2	208	33.9	13.2	.86	.58
Max..	3.5	....	....	....	....	....	151	402	84	43	8.5	4.2
Min..	0	....	....	....	....	....	6	66	9.8	.9	0	0
Acre-ft.	78	83	....	....	....	....	2990	12770	2020	814	53	35

Total run-off for period=18,843 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Buzzard Creek Near Heiberger, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0.1	2.0	....	....	....	....	....	502	345	33	0.5	1.9
2....	.2	1.8	....	....	....	....	....	366	342	27	.5	6.9
3....	.2	1.7	....	....	....	....	....	300	356	22	.4	16
4....	.3	1.6	....	....	....	....	....	242	338	20	.3	20
5....	.4	1.6	....	....	....	....	....	236	331	20	.2	11
6....	.4	3.5	....	....	....	....	....	181	310	16	.2	8.1
7....	.6	5.2	....	....	....	....	....	151	254	15	.2	8.4
8....	.6	5.8	....	....	....	....	....	134	210	14	.2	8.4
9....	.6	4.8	....	....	....	....	....	155	196	11	.2	8.4
10....	.6	5.8	....	....	....	....	....	181	193	7.5	.2	8.7
11....	.6	4.8	....	....	....	....	....	272	202	5.5	.2	9.0
12....	.6	4.2	....	....	....	....	....	359	181	5.5	.1	16
13....	.7	4.4	....	....	....	....	....	440	296	4.8	.1	22
14....	.8	3.5	....	....	....	....	....	597	210	9.8	1.3	13
15....	8.1	3.9	....	....	....	....	....	580	126	13	1.8	6.9
16....	12	1.9	....	....	....	....	....	583	110	6.9	1.0	5.5
17....	8.7	3.5	....	....	....	....	....	534	100	4.2	.6	4.4
18....	12	3.4	....	....	....	....	Apr. 20	502	97	3.1	.4	3.4
19....	9.0	2.7	....	....	....	....	to 30	457	85	2.1	.3	2.6
20....	5.3	3.4	....	....	....	....	166	415	82	1.7	.2	1.8
21....	3.4	4.0	....	....	....	....	191	359	99	1.0	.2	1.6
22....	3.2	3.8	....	....	....	....	215	348	128	.8	.1	1.7
23....	3.2	3.2	....	....	....	....	331	306	91	.6	.1	1.3
24....	3.1	4.2	....	....	....	....	415	352	83	.6	.1	1.1
25....	3.7	3.2	....	....	....	....	464	376	64	.6	.1	1.1
26....	3.7	3.1	....	....	....	....	412	373	40	.6	.1	1.0
27....	3.4	3.0	....	....	....	....	359	401	36	3.1	.1	1.0
28....	2.7	3.2	....	....	....	....	398	450	54	2.3	.1	1.0
29....	2.4	3.5	....	....	....	....	496	443	68	1.4	0	1.0
30....	2.3	3.2	....	....	....	....	583	387	43	.8	0	1.1
31....	2.6	....	....	....	....	....	....	352	....	.5	0	....
Total	95.5	103.9	....	....	....	....	4030	11334	5070	254.4	9.8	194.3
Mean.	3.08	3.46	....	....	....	....	366	366	169	8.21	.32	6.48
Max..	12	5.8	....	....	....	....	583	597	356	33	1.8	....
Min..	.1	1.6	....	....	....	....	166	134	36	.5	0	1.0
Acre-ft.	189	206	....	....	....	....	7990	22480	10060	505	19	385

Total run-off for period=41,834 acre-feet.

Discharge of Buzzard Creek Near Collbran, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.0	4.5	....	....	....	4.0	8.7	82	110	34	2.7	1.0
2....	2.2	4.9	....	....	....	3.8	9.0	127	98	21	1.6	1.1
3....	2.3	4.9	....	....	....	3.8	11	170	92	16	1.5	.8
4....	2.3	4.7	....	....	....	3.6	9.8	219	90	12	1.0	.8
5....	2.7	4.7	....	....	....	4.0	8.2	267	86	11	.6	2.5
6....	2.7	4.7	....	....	....	4.4	11	296	68	11	1.0	4.5
7....	2.7	4.5	....	....	....	4.8	12	355	56	13	1.0	2.9
8....	2.9	4.8	....	....	....	4.8	11	405	49	19	.7	2.0
9....	2.5	4.4	....	....	....	5.4	14	450	43	26	.7	1.0
10....	2.5	4.2	....	....	....	5.8	17	395	41	41	.6	.7
11....	2.5	4.0	....	....	....	6.2	27	365	37	42	.6	.8
12....	2.7	3.8	....	....	....	6.8	29	315	35	36	.5	.6
13....	2.5	3.6	....	....	....	7.0	35	280	34	67	.4	.6
14....	2.5	3.7	....	....	....	6.7	45	305	32	44	.4	.5
15....	2.9	3.8	....	....	....	6.3	72	340	29	26	.4	.5
16....	2.9	3.7	....	*1.8	....	6.0	90	298	26	22	.5	.4
17....	2.9	3.5	....	....	....	5.6	101	276	24	18	2.5	.4
18....	2.9	3.4	....	....	....	6.0	101	296	24	20	1.3	.4
19....	2.9	3.3	....	....	....	8.2	92	271	23	17	.8	.4
20....	3.3	3.2	....	....	....	8.4	104	213	22	13	.7	.5
21....	3.7	3.2	....	....	....	8.4	146	196	20	10	.6	.6
22....	3.5	3.0	....	....	*2.5	6.5	186	188	18	7.7	.4	.8
23....	3.5	3.0	....	....	....	7.0	140	170	16	8.2	.4	1.1
24....	3.3	2.8	....	....	....	4.3	61	154	15	4.9	.4	.8
25....	3.1	2.6	....	....	....	4.5	38	132	15	3.5	.3	.7
26....	2.9	2.6	....	....	....	5.2	76	113	16	3.3	.3	.7
27....	2.5	2.4	....	....	....	7.0	161	123	18	7.5	.3	.7
28....	2.7	2.4	....	....	....	5.6	130	126	18	2.5	.4	.7
29....	2.7	2.2	....	....	....	6.3	104	126	14	2.5	7.0	1.0
30....	3.3	2.2	....	....	....	5.2	74	200	25	2.9	10	.8
31....	4.5	....	....	....	....	6.0	....	150	....	4.7	2.5	....
Total	88.5	108.7	....	....	....	177.6	1923.7	7403	1194	561.7	42.1	30.3
Mean.	2.85	3.62	2.0	1.6	2.4	5.73	64.1	239	39.8	18.1	1.36	1.01
Max..	4.5	4.9	....	....	....	8.4	186	450	110	67	10	4.5
Min..	2.0	2.2	....	....	....	3.6	8.2	82	14	2.5	0.3	0.4
Acre-ft.	176	216	123	98	133	352	3820	14680	2370	1110	84	60

Total run-off for water year 1936-37=23,220 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Buzzard Creek Near Collbran, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	0.5	4.5	4.7	5.4	6.2	9.0	16	598	359	57	1.0	2.5
2....	1.0	4.5	4.9	5.0	6.6	9.5	12	375	345	45	1.0	8.0
3....	2.3	4.3	5.0	5.4	6.8	13	13	334	356	37	1.0	15
4....	2.3	4.5	4.5	5.8	6.2	45	22	278	347	32	.9	22
5....	2.4	4.0	4.4	5.2	5.8	35	55	284	330	28	.8	14
6....	2.5	4.3	4.6	4.8	5.2	23	41	242	321	23	.8	8.4
7....	2.7	5.8	5.2	5.6	5.2	20	31	221	280	21	.7	6.2
8....	2.7	6.4	5.0	4.8	5.2	17	18	188	246	26	.6	5.2
9....	3.2	6.2	5.2	5.2	6.0	13	39	258	226	17	.6	6.0
10....	4.3	6.6	5.8	5.8	7.0	12	42	258	222	11	.6	7.9
11....	5.0	6.6	6.0	5.8	8.8	13	49	296	222	9.5	.6	12
12....	5.4	6.2	12	6.0	8.6	15	96	366	194	7.4	.6	32
13....	6.0	5.4	13	6.6	*8.3	15	140	433	269	7.4	.6	35
14....	7.0	5.6	7.9	6.8	8.6	16	120	592	226	8.4	1.4	15
15....	36	5.6	7.7	6.4	8.8	17	89	654	155	13	1.3	9.2
16....	26	4.9	7.9	6.0	8.4	13	136	672	137	13	1.9	6.8
17....	13	5.4	6.6	*5.9	7.7	22	215	622	126	8.4	1.2	5.6
18....	23	5.8	6.6	6.2	8.2	19	230	538	123	6.8	1.0	4.5
19....	17	5.2	6.8	6.0	7.9	20	345	518	113	4.9	.8	4.0
20....	9.7	6.4	6.0	5.8	8.2	31	388	446	107	3.3	.8	3.7
21....	7.0	7.9	5.0	5.8	8.2	39	424	390	129	3.3	.7	3.2
22....	6.4	8.2	4.8	6.0	7.7	30	462	381	158	3.3	.7	3.4
23....	6.2	6.8	5.0	5.8	7.7	15	534	341	121	3.0	.6	3.2
24....	5.4	5.8	5.6	5.6	7.7	17	564	375	110	2.2	.6	2.8
25....	6.0	5.6	5.0	5.4	8.2	31	588	406	86	2.5	.6	2.5
26....	6.2	4.9	4.8	5.4	8.4	23	536	392	74	2.6	.6	2.4
27....	6.2	4.4	5.0	5.6	8.4	18	383	428	67	2.5	.5	2.3
28....	5.6	4.8	5.0	6.0	8.4	31	435	464	74	3.2	.5	2.3
29....	5.0	5.8	5.0	6.4	....	26	504	466	93	2.0	.5	2.4
30....	4.9	5.2	5.2	6.2	....	16	644	415	79	1.2	.5	2.5
31....	4.7	....	5.6	6.0	....	12	....	368	....	1.0	.5	....
Total	235.4	167.6	185.8	178.7	208.4	635.5	7171	12599	5695	405.9	24.5	250.0
Mean.	7.59	5.59	5.99	5.76	7.44	20.5	239	406	190	13.1	.79	8.33
Max..	36	8.2	13	6.8	8.8	45	644	672	359	57	1.9	35
Min..	.5	4.0	4.4	4.8	5.2	9.0	12	188	67	1.0	.5	2.3
Acre-ft.	467	332	369	354	413	1260	14220	24990	11300	805	49	496

Total run-off for water year 1937-38=55,060 acre-feet.

*Discharge measurement.

Discharge of Taylor River at Almont, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	190	204	102	96	105	105	114	388	816	534	254	208
2....	197	190	99	96	105	105	119	470	816	505	235	190
3....	212	124	94	98	100	105	124	736	864	465	262	186
4....	216	132	94	98	98	105	119	872	744	427	227	204
5....	208	166	94	98	96	105	116	969	678	412	216	194
6....	219	157	90	98	98	105	121	996	619	393	258	172
7....	212	160	88	98	100	105	116	1060	564	388	238	92
8....	208	119	86	98	105	105	111	1010	546	388	223	79
9....	204	139	84	98	100	110	116	987	558	365	208	79
10....	197	137	78	98	96	110	114	1000	546	361	194	74
11....	190	145	84	98	95	110	124	960	588	352	183	70
12....	186	129	84	98	95	110	121	888	650	465	179	64
13....	186	142	82	98	98	115	132	1020	613	432	183	54
14....	183	151	86	98	100	115	154	1160	607	417	183	54
15....	179	142	90	98	100	115	197	1370	582	370	179	56
16....	179	137	94	98	105	115	235	1430	594	339	204	56
17....	169	134	96	100	105	115	235	1390	650	304	219	52
18....	166	142	98	100	105	115	208	1390	657	295	219	74
19....	163	119	98	100	105	115	258	1360	650	282	204	72
20....	194	124	94	103	105	115	290	1120	588	266	176	72
21....	197	134	90	103	105	115	330	1140	625	246	169	70
22....	183	121	90	98	105	115	451	1160	685	235	169	70
23....	194	111	94	98	105	115	393	1210	613	231	166	68
24....	179	106	94	98	105	113	286	969	552	219	163	68
25....	179	106	100	96	105	109	250	896	546	219	160	66
26....	194	116	98	96	105	114	412	800	856	235	169	60
27....	176	109	94	98	105	116	576	792	685	235	160	60
28....	186	109	94	100	105	116	422	952	558	274	179	58
29....	172	104	96	105	....	116	330	1040	499	356	186	54
30....	183	106	96	105	....	116	295	1220	499	304	231	72
31....	204	....	96	105	....	116	....	1040	....	274	238	....
Total	5995	4015	2857	3069	2856	3461	6869	31795	19048	10588	6234	2748
Mean.	190	134	92.2	99.0	102	112	229	1026	635	342	201	91.6
Max..	219	204	102	105	105	116	576	1430	864	534	262	208
Min..	163	104	78	96	95	105	111	388	499	219	160	52
Acre-ft.	11710	7960	5670	6090	5660	6860	13620	63060	37780	21000	12360	5450

Total run-off for water year 1936-37=197,200 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Taylor River at Almont, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	74	60	46	47	60	30	38	774	1430	1030	232	586
2....	68	50	50	50	64	38	30	694	1590	1000	237	534
3....	62	50	60	53	64	54	36	666	1650	955	224	453
4....	64	52	58	51	64	58	34	574	1690	870	206	358
5....	60	45	52	50	62	43	38	568	1790	814	250	315
6....	54	46	46	48	58	32	40	479	1820	729	387	250
7....	56	60	46	47	57	28	36	453	1790	638	387	127
8....	62	52	52	48	56	30	90	447	1760	568	310	106
9....	62	48	48	48	54	30	121	437	1730	534	224	115
10....	64	66	43	50	53	30	50	442	1710	500	232	112
11....	41	58	48	52	52	30	50	474	1630	490	215	127
12....	37	54	52	54	54	24	72	479	1600	479	202	159
13....	39	50	52	56	58	34	86	490	1580	447	206	190
14....	39	52	50	57	60	38	100	528	1500	468	202	159
15....	52	58	50	58	60	36	76	574	1450	463	186	144
16....	60	46	52	58	58	34	74	598	1390	490	182	148
17....	52	54	54	59	57	38	81	586	1310	500	237	144
18....	60	54	54	60	52	32	137	556	1320	490	402	134
19....	58	54	47	58	55	30	206	544	1320	484	397	124
20....	66	54	42	57	56	34	264	539	1330	479	422	118
21....	72	56	42	57	45	38	334	539	1400	463	479	282
22....	70	54	42	58	49	32	432	556	1400	447	506	264
23....	70	45	46	56	50	30	539	506	1410	315	556	162
24....	68	60	50	56	52	34	598	339	1390	287	550	170
25....	68	54	43	58	53	32	652	402	1350	278	544	155
26....	68	56	44	52	55	38	701	586	1320	268	544	152
27....	66	56	44	54	56	33	680	687	1250	282	539	148
28....	66	55	43	56	33	33	722	955	1200	282	539	152
29....	64	54	43	58	....	34	750	1310	1150	264	544	144
30....	64	45	48	60	....	36	782	1340	1080	228	539	137
31....	64	....	52	58	....	30	....	1320	....	224	550	....
Total	1870	1598	1499	1684	1547	1073	7849	19442	44340	15766	11230	6169
Mean	60.3	53.3	48.4	54.3	55.2	34.6	262	627	1478	509	362	206
Max.	74	66	60	60	64	58	782	1340	1820	1030	556	586
Min.	37	45	42	47	33	24	30	339	1080	224	182	106
Acre-ft.	3710	3170	2970	3340	3070	2130	15570	38560	87950	31270	22270	12240

Total run-off for water year 1937-38=226,200 acre-feet.

Discharge of East River at Almont, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	85	106	58	64	61	58	56	454	1110	568	188	133
2....	85	89	48	60	58	60	63	578	1100	562	203	127
3....	87	72	57	56	60	62	64	790	1030	490	212	120
4....	89	81	57	57	60	61	63	1000	900	458	200	110
5....	87	90	57	60	64	58	70	1220	809	420	234	106
6....	95	89	57	62	67	64	81	1350	698	403	264	110
7....	92	89	54	63	69	61	70	1420	622	375	209	116
8....	93	78	55	64	63	54	66	1380	595	347	203	106
9....	93	81	54	62	60	57	63	1620	634	315	194	104
10....	93	84	53	59	59	56	67	1670	639	315	180	101
11....	93	82	54	58	59	58	76	1600	796	327	171	99
12....	92	84	54	59	60	57	78	1420	861	347	160	93
13....	92	87	55	65	62	57	87	1590	835	379	158	76
14....	95	89	58	64	64	56	106	1730	802	391	166	57
15....	95	85	60	62	67	53	150	1880	764	363	158	49
16....	97	82	66	56	63	58	188	2010	809	308	158	49
17....	97	80	62	61	63	57	200	1990	900	278	163	51
18....	95	82	57	64	63	57	206	2060	914	264	182	63
19....	92	73	56	62	68	56	274	1830	894	244	177	81
20....	95	77	56	61	67	50	308	1530	828	212	152	82
21....	97	78	56	58	66	53	383	1550	900	200	148	85
22....	93	72	58	56	67	56	505	1570	935	182	148	82
23....	92	65	56	57	66	57	490	1600	880	166	142	97
24....	87	68	56	59	65	50	407	1330	796	148	142	103
25....	89	64	62	60	65	53	359	1220	758	138	138	90
26....	90	63	59	57	66	58	472	1010	746	150	133	89
27....	87	61	60	57	64	56	668	1000	698	150	127	87
28....	90	61	66	59	60	50	562	1240	628	180	124	84
29....	89	58	64	62	....	58	445	1590	600	224	148	89
30....	99	56	60	63	....	51	391	1640	584	203	177	108
31....	110	....	60	64	....	60	....	1290	....	194	158	....
Total	2865	2326	1785	1871	1776	1752	7018	44162	24065	9301	5317	2757
Mean	92.4	77.5	57.6	60.4	63.4	56.5	234	1425	802	300	172	91.9
Max.	110	106	66	65	69	64	668	2060	1110	568	264	133
Min.	85	56	48	56	58	50	56	454	584	138	124	49
Acre-ft.	5680	4610	3540	3710	3520	3480	13920	87590	47730	18450	10550	5470

Total run-off for water year 1936-37=208,200 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of East River at Almont, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	105	134	90	86	81	61	61	1230	2060	1050	280	171
2....	103	132	103	90	83	60	61	913	2070	968	284	252
3....	101	144	100	88	85	61	61	791	2260	936	288	249
4....	100	147	94	86	85	57	69	662	2450	899	268	231
5....	100	163	91	83	83	56	72	621	2410	857	264	198
6....	98	158	93	80	81	57	74	535	2360	778	280	185
7....	94	130	94	78	76	54	70	485	2250	704	322	177
8....	90	114	91	79	72	56	67	436	2040	668	322	185
9....	96	112	94	79	69	60	69	426	1820	633	327	168
10....	98	112	96	80	69	60	75	458	1820	604	345	155
11....	93	103	98	81	66	57	77	507	1600	581	318	160
12....	91	96	107	83	70	64	90	569	1580	604	296	207
13....	88	100	105	84	76	64	124	698	1830	633	288	234
14....	86	116	98	84	77	63	132	976	1690	604	300	201
15....	100	110	91	84	75	56	120	1220	1500	639	272	177
16....	100	101	94	82	72	56	124	1390	1500	563	238	171
17....	107	109	100	81	67	61	147	1260	1480	524	227	160
18....	114	109	100	83	64	64	198	1040	1540	463	220	152
19....	105	114	94	80	69	58	284	984	1360	441	201	142
20....	100	137	90	79	77	63	354	906	1280	401	191	126
21....	100	134	89	81	67	69	401	857	1570	377	182	116
22....	98	114	88	82	67	66	463	892	2040	377	168	110
23....	100	101	92	*78	64	63	535	830	1730	368	163	109
24....	98	103	97	76	60	67	716	928	1490	358	163	109
25....	114	100	92	77	61	70	878	1040	1420	331	157	107
26....	116	96	89	75	67	72	1040	1180	1400	331	160	107
27....	118	98	89	76	75	69	899	1480	1300	354	160	103
28....	122	98	89	80	60	72	968	1710	1230	381	163	93
29....	122	97	90	80	....	66	1060	2240	1300	368	157	91
30....	120	100	92	80	....	64	1160	2190	1220	340	155	91
31....	122	....	93	80	....	58	....	2040	....	300	152	....
Total	3199	3482	2923	2515	2018	1924	10449	31494	51600	17435	7311	4737
Mean.	103	116	94.3	81.1	72.1	62.1	348	1016	1720	562	236	158
Max..	122	163	107	90	85	72	1160	2240	2450	1050	345	252
Min..	86	96	88	75	60	54	61	426	1220	300	152	91
Acre-ft.	6350	6910	5800	4990	4000	3820	20730	62470	102300	34580	14500	9400

Total run-off for water year 1937-38=275,800 acre-feet.

*Discharge measurement.

Discharge of Tomichi Creek at Sargents, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	175	379	89	30	45
2....	157	367	84	29	41
3....	155	367	79	30	53
4....	135	359	71	29	46
5....	128	353	63	28	40
6....	111	342	60	29	35
7....	93	308	58	33	36
8....	95	286	52	37	45
9....	89	275	46	36	33
10....	87	266	41	33	33
11....	93	241	41	33	38
12....	104	236	44	34	50
13....	116	250	47	34	52
14....	161	222	47	32	41
15....	217	212	55	28	38
16....	252	202	47	25	38
17....	Apr. 18 to 30	252	184	42	25	38
18....	189	241	175	38	25	35
19....	194	233	159	37	24	33
20....	135	230	153	40	23	32
21....	153	244	155	40	23	32
22....	147	247	149	37	23	32
23....	159	227	157	37	23	32
24....	161	222	128	35	24	30
25....	179	233	111	34	23	30
26....	179	250	104	34	23	32
27....	155	275	107	40	23	30
28....	153	308	104	40	24	30
29....	155	379	107	37	24	30
30....	161	394	109	34	24	30
31....	382	30	30	26	....
Total	2120	6285	6567	1479	857	1110
Mean.	163	203	219	47.7	27.6	37.0
Max..	194	394	379	89	37	53
Min..	135	87	104	30	23	30
Acre-ft.	4200	12470	13030	2930	1700	2200

Total run-off for period=36,530 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Tomichi Creek at Gunnison, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	584	931	388	134	163
2....	578	938	345	136	216
3....	505	918	307	139	230
4....	475	918	256	143	230
5....	408	905	212	143	216
6....	384	886	170	139	204
7....	364	905	143	143	195
8....	316	879	134	160	183
9....	307	816	109	178	146
10....	284	750	98	178	136
11....	265	708	86	183	167
12....	265	642	77	183	221
13....	270	612	82	178	297
14....	288	648	86	178	256
15....	379	666	111	170	212
16....	510	562	150	156	195
17....	589	530	121	143	187
18....	Apr. 20	636	505	105	139	178
19....	to 30	624	490	92	128	156
20....	530	584	475	89	118	146
21....	550	515	510	87	114	134
22....	545	510	545	92	109	128
23....	567	556	567	124	105	124
24....	584	525	600	153	105	126
25....	606	456	572	167	107	128
26....	624	461	461	150	100	124
27....	624	515	388	150	96	118
28....	545	606	369	191	98	111
29....	535	714	360	191	100	109
30....	525	853	403	174	102	103
31....	905	....	143	109	....
Total	6235	15231	19459	4783	4214	5139
Mean.	567	491	649	154	136	171
Max..	624	905	938	388	183	297
Min..	525	265	360	77	96	103
Acre-ft.	12370	30210	38600	9490	8360	10190

Total run-off during period=109,200 acre-feet.

Discharge of Quartz Creek Near Ohio, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	145	434	112	47	78
2....	119	414	104	48	66
3....	102	434	92	55	78
4....	85	418	78	50	58
5....	78	414	83	48	51
6....	68	405	88	52	45
7....	72	346	83	60	51
8....	83	325	76	62	55
9....	51	307	70	57	50
10....	55	304	62	51	50
11....	66	268	57	45	54
12....	74	292	62	43	85
13....	102	313	68	43	92
14....	162	248	78	42	78
15....	206	248	70	38	72
16....	231	234	64	40	72
17....	228	214	62	40	60
18....	225	197	57	40	52
19....	217	174	54	36	42
20....	222	169	57	32	43
21....	222	184	58	33	42
22....	222	197	62	32	44
23....	187	187	66	33	42
24....	184	169	62	33	36
25....	203	155	51	34	38
26....	262	152	48	34	36
27....	313	150	52	33	34
28....	402	143	52	38	36
29....	126	469	148	52	44	39
30....	140	499	140	51	43	37
31....	446	....	51	50	....
Total	6000	7783	2082	1336	1616
Mean.	194	259	67.2	43.1	53.9
Max..	499	434	112	62	92
Min..	51	140	48	32	34
Acre-ft.	11900	15440	4130	2650	3210

Total run-off for period=37,330 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cebolla Creek at Powderhorn, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	498	670	194	68	74
2	245	537	181	68	84
3	236	607	168	76	102
4	211	726	153	74	94
5	200	568	135	76	87
6	187	514	130	79	97
7	168	386	124	84	89
8	171	330	116	87	92
9	187	282	105	74	84
10	181	268	97	92	71
11	187	241	110	84	97
12	218	245	102	76	102
13	218	393	110	89	102
14	323	316	127	81	97
15	430	264	124	79	92
16	430	273	110	74	87
17	422	273	100	76	87
18	372	296	94	68	81
19	Apr. 21	364	264	94	68	74
20	to 30	343	277	94	66	68
21	254	323	330	92	63	66
22	259	364	357	94	71	66
23	309	289	393	94	63	63
24	336	282	330	81	71	61
25	430	330	264	79	71	63
26	490	422	245	76	68	63
27	350	545	225	94	74	61
28	372	646	214	102	68	56
29	460	830	232	81	71	54
30	553	766	232	81	76	56
31	678	...	74	74	...
Total	3813	11066	10552	3416	2309	2370
Mean.	381	357	352	110	74.5	79
Max.	553	830	726	194	92	102
Min.	254	168	214	74	63	54
Acre-ft.	7560	21950	20930	6780	4580	4700

Total run-off for period=66,500 acre-feet.

Discharge of Henson Creek at Lake City, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	34	25	15	14	14	14	14	115	190	178	69	52
2....	34	25	14	13	13	15	16	129	227	166	74	54
3....	33	24	13	13	13	16	18	159	247	152	70	61
4....	33	26	14	13	14	15	18	198	204	145	55	59
5....	33	26	14	14	15	15	18	250	163	140	68	57
6....	35	26	14	14	16	14	18	217	145	145	75	48
7....	33	22	14	14	16	14	17	208	187	159	78	66
8....	34	22	14	14	15	14	20	311	190	134	72	65
9....	34	22	14	14	14	15	22	423	184	128	65	61
10....	33	22	13	14	14	15	23	401	204	123	61	59
11....	32	23	14	13	14	16	25	343	289	129	35	47
12....	32	23	14	13	15	17	27	376	278	120	47	47
13....	31	23	14	13	15	18	35	454	293	115	59	45
14....	31	23	14	13	16	17	50	496	264	110	50	43
15....	31	23	14	13	16	16	85	532	247	102	53	38
16....	31	20	15	13	15	17	79	556	300	96	49	33
17....	30	19	15	13	15	18	77	532	336	92	52	33
18....	29	19	15	14	15	18	85	476	329	87	60	39
19....	30	18	14	13	16	16	90	416	314	84	49	41
20....	30	18	14	13	16	14	88	401	311	81	41	41
21....	31	18	14	13	15	14	100	416	307	78	44	39
22....	29	18	14	12	16	15	95	438	311	75	40	34
23....	29	18	13	13	15	14	90	419	286	53	34	28
24....	27	18	14	13	15	14	86	343	244	68	40	21
25....	26	17	14	13	15	13	98	230	237	68	39	22
26....	27	17	14	12	16	14	100	201	220	66	38	24
27....	26	16	14	13	15	13	110	289	187	76	32	32
28....	22	16	14	14	14	13	112	343	181	76	32	30
29....	22	17	14	14	....	14	108	325	181	93	40	32
30....	23	17	14	15	....	13	100	261	184	76	42	42
31....	24	....	14	15	....	13	....	217	....	68	43	....
Total	929	621	435	415	418	464	1824	10475	7240	3283	1606	1293
Mean..	30.0	20.7	14.0	13.4	14.9	15.0	60.8	338	241	106	51.8	43.1
Max..	35	26	15	15	16	18	112	556	336	178	78	66
Min..	22	16	13	12	13	13	14	115	145	53	32	21
Acre-ft.	1840	1230	863	823	829	920	3620	20780	14360	6510	3190	2560

Total run-off for water year 1936-37=57,520 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Lake Fork at Lake City, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	36	28	16	12	11	11	13	80	193	193	54	37
2....	35	28	15	12	10	11	14	72	184	188	51	39
3....	35	26	14	12	10	12	17	115	204	175	51	40
4....	34	24	13	12	11	11	17	182	201	155	49	42
5....	34	24	13	13	12	11	17	255	184	149	47	43
6....	36	25	13	13	12	11	15	291	173	138	51	42
7....	36	23	14	13	12	11	15	235	162	162	55	44
8....	36	23	13	13	11	12	17	291	182	153	55	45
9....	35	23	13	13	11	12	20	362	188	140	51	44
10....	34	24	13	11	10	12	23	424	173	129	48	43
11....	34	24	13	11	10	12	23	351	210	129	45	41
12....	34	25	13	11	11	13	24	340	237	127	42	39
13....	33	25	13	11	11	13	25	416	230	119	40	37
14....	32	25	13	12	11	13	30	489	245	108	38	34
15....	32	25	13	12	11	12	39	515	220	100	37	33
16....	31	25	13	11	10	13	48	546	237	92	39	32
17....	31	20	14	12	10	13	56	569	282	86	40	30
18....	31	20	13	12	10	12	70	573	305	80	39	29
19....	31	20	13	12	11	12	68	456	308	76	40	28
20....	31	19	12	12	10	11	64	392	285	73	37	28
21....	31	20	13	11	10	11	84	392	298	68	35	28
22....	31	19	12	10	10	12	82	396	295	63	34	27
23....	29	18	12	10	11	13	78	400	295	59	33	26
24....	28	18	13	10	10	12	70	347	264	57	33	26
25....	28	18	13	10	10	12	78	267	240	57	34	26
26....	28	18	12	10	11	13	86	208	225	58	33	25
27....	28	18	12	10	11	12	100	195	218	60	33	25
28....	28	18	13	10	11	11	98	245	195	62	33	24
29....	27	17	13	11	....	12	96	291	186	64	34	25
30....	27	16	12	12	....	11	93	264	197	63	34	31
31....	28	....	12	12	....	12	....	225	....	57	34	....
Total	984	656	404	356	299	369	1480	10184	6816	3240	1279	1013
Mean.	31.7	21.9	13.0	11.5	10.7	11.9	49.3	329	227	105	41.3	33.8
Max..	36	28	16	13	12	13	100	573	308	193	55	45
Min..	27	16	12	10	10	11	13	72	162	57	33	24
Acre-ft.	1950	1300	801	706	593	732	2940	20200	13520	6430	2540	2010

Total run-off for water year 1936-37=53,720 acre-feet.

Discharge of Lake Fork at Gateview, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	562	1700	1540	340	196
2....	404	1610	1410	290	222
3....	333	1820	1320	230	285
4....	293	1960	1280	210	323
5....	262	1820	1190	204	266
6....	239	1710	1070	210	239
7....	226	1340	1080	240	213
8....	205	998	858	240	191
9....	199	832	824	230	179
10....	190	950	794	230	183
11....	196	838	741	230	200
12....	230	889	689	230	208
13....	262	1500	689	220	208
14....	373	1190	654	220	196
15....	571	1030	671	210	183
16....	682	1110	666	196	183
17....	710	1360	632	185	179
18....	624	1550	609	175	170
19....	603	1440	587	165	160
20....	553	1560	566	162	140
21....	558	2130	534	160	150
22....	Apr. 24 to 30	599	2100	508	155	170
23....	536	2050	476	150	125	....
24....	468	544	1870	466	150	115
25....	510	639	1830	435	147	108
26....	493	838	1870	430	147	105
27....	412	1100	1760	435	162	102
28....	392	1330	1610	450	158	105
29....	468	1630	1640	430	162	98
30....	585	1630	1720	400	162	102
31....	1640	....	380	204	....
Total	3328	18761	45787	22814	6174	5304
Mean.	475	605	1526	736	199	177
Max..	585	1640	2130	1540	340	323
Min..	392	190	832	380	147	98
Acre-ft.	6600	37210	90820	45250	12250	10520

Total run-off for period=202,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Gunnison River at Iola, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....								2790	4670	2750	730	948
2....								2300	4900	2540	741	1120
3....								2000	5180	2370	775	1120
4....								1670	5500	2210	708	1020
5....								1480	5640	1990	719	889
6....								1310	5610	1800	889	877
7....								1190	5500	1540	912	663
8....								1070	5170	1390	936	630
9....								1050	4900	1280	775	564
10....								1020	4880	1180	866	512
11....								1070	4570	1130	797	543
12....								1200	4330	1120	730	708
13....								1270	4550	1130	741	866
14....								1750	4570	1150	764	775
15....								2340	4220	1210	696	696
16....								2710	3970	1200	597	663
17....								2690	3840	1180	554	630
18....							Apr. 20	2400	3860	1120	730	575
19....							to 30	2210	3620	1070	696	522
20....							1130	2040	3490	1030	674	491
21....							1250	1860	4020	1000	730	470
22....							1470	1960	4550	1000	730	652
23....							1640	1860	4370	936	809	440
24....							1970	1740	4110	900	832	419
25....							2230	1820	3890	900	820	409
26....							2670	2210	3690	854	797	389
27....							2320	2790	3420	900	797	368
28....							2300	3450	3180	1000	797	340
29....							2360	4390	3140	924	809	323
30....							2490	4720	3120	843	809	296
31....								4600		764	820	....
Total							21830	66960	130460	40411	23780	18918
Mean.							1985	2160	4349	1304	767	631
Max..							2670	4720	5640	2750	936	1120
Min..							1130	1020	3120	764	554	296
Acre-ft.							43300	132800	258800	80150	47170	37520

Total run-off during period=599,700 acre-feet.

Discharge of East Muddy Creek Near Bardine, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	10	18	....	....	....	....	28	135	222	48	35	24
2....	10	18	....	....	....	....	35	190	204	48	33	24
3....	9.5	20	....	....	....	....	40	293	204	48	33	28
4....	9.5	20	....	....	....	....	33	359	193	48	33	28
5....	10	20	....	....	....	....	28	385	180	42	35	22
6....	11	23	....	....	....	....	31	385	148	40	33	23
7....	11	14	....	....	....	....	29	390	132	40	31	29
8....	11	24	....	....	....	....	28	471	115	40	29	22
9....	16	26	....	....	....	....	35	516	112	48	28	20
10....	11	26	....	....	....	....	44	550	110	52	26	18
11....	11	24	....	....	....	....	61	544	120	48	23	17
12....	10	29	....	....	....	....	68	505	118	63	20	16
13....	11	33	....	....	....	....	80	533	115	96	17	14
14....	12	26	....	....	....	....	118	516	99	80	17	14
15....	10	23	....	....	....	Mar. 17	180	584	91	61	17	14
16....	9.5	14	....	....	....	to 31	222	584	88	55	22	14
17....	12	12	....	....	....	42	211	510	88	52	29	16
18....	12	9.5	....	....	....	35	167	488	93	57	31	16
19....	12	11	....	....	....	35	193	433	91	52	23	14
20....	20	18	....	....	....	44	180	370	91	50	20	14
21....	22	26	....	....	....	40	238	349	91	48	20	13
22....	18	22	....	....	....	42	275	340	91	42	20	14
23....	17	26	....	....	....	28	258	302	88	38	20	23
24....	14	42	....	....	....	33	180	258	75	35	18	22
25....	16	22	....	....	....	29	157	234	70	35	18	16
26....	14	14	....	....	....	28	200	218	68	33	14	14
27....	13	17	....	....	....	28	293	197	66	31	13	14
28....	13	18	....	....	....	29	238	211	61	44	28	14
29....	14	16	....	....	....	28	170	250	57	38	33	17
30....	17	17	....	....	....	24	129	320	50	37	31	26
31....	18	....	....	....	....	23	....	266	....	37	26	....
Total	404.5	628.5	....	....	....	488	3949	11686	3331	1486	276	560
Mean.	13.0	21.0	....	....	....	32.5	132	377	111	47.9	25.0	18.7
Max..	22	42	....	....	....	44	293	584	222	96	35	29
Min..	9.5	9.5	....	....	....	23	28	135	50	31	13	13
Acre-ft.	802	1250	....	....	....	968	7830	23180	6610	2950	1540	1110

Total run-off for period=46,240 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of East Muddy Creek Near Bardine, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	26	20	....	....	....	....	52	889	736	155	30	62
2....	23	18	....	....	....	....	54	632	680	136	28	54
3....	22	17	....	....	....	....	52	523	688	130	26	75
4....	17	16	....	....	....	....	59	424	656	122	26	54
5....	17	13	....	....	....	....	83	397	595	102	23	39
6....	17	16	....	....	....	....	94	350	558	91	24	33
7....	17	22	....	....	....	....	83	320	476	80	28	31
8....	17	23	....	....	....	....	70	294	482	77	30	41
9....	17	17	....	....	....	....	75	294	402	77	28	33
10....	17	20	....	....	....	....	83	325	402	72	26	31
11....	17	20	....	....	....	....	91	414	402	62	24	37
12....	17	18	....	....	....	....	114	516	365	62	23	46
13....	17	20	....	....	....	....	128	656	419	94	24	46
14....	16	20	....	....	....	....	142	934	370	75	31	26
15....	40	22	....	....	....	....	142	1040	316	57	30	23
16....	35	18	....	....	....	....	142	1070	302	57	26	23
17....	26	17	....	....	....	....	175	970	280	54	24	21
18....	28	20	....	....	....	....	234	864	267	52	19	19
19....	26	23	....	....	....	....	289	848	255	52	18	19
20....	23	26	....	....	....	....	335	768	246	48	19	19
21....	20	28	....	....	....	....	325	712	276	46	18	19
22....	20	28	....	....	....	....	370	680	294	44	16	19
23....	20	24	....	....	....	Mar. 25	450	632	255	39	15	18
24....	18	28	....	....	....	to 31	595	680	231	37	16	19
25....	22	23	....	....	....	75	728	760	199	37	16	19
26....	22	22	....	....	....	75	720	824	185	39	16	19
27....	22	20	....	....	....	70	588	898	168	50	16	19
28....	23	18	....	....	....	77	712	988	178	44	18	19
29....	22	18	....	....	....	72	832	1020	209	37	19	19
30....	23	16	....	....	....	67	997	889	175	33	19	19
31....	23	....	....	....	....	64	....	808	....	31	21	....
Total	670	611	....	....	....	500	8814	21419	11067	2092	697	921
Mean.	21.6	20.4	....	....	....	71.4	294	691	369	67.5	22.5	30.7
Max..	40	28	....	....	....	77	997	1070	736	155	31	75
Min..	16	13	....	....	....	64	52	294	168	31	15	18
Acre-ft.	1330	1210	....	....	....	992	17480	42480	21950	4150	1380	1830

Total run-off for period=92,802 acre-feet.

Discharge of North Fork of Gunnison River Near Somerset, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	84	103	65	55	56	57	111	935	1460	447	158	117
2....	80	99	58	55	54	58	155	1290	1400	406	153	111
3....	80	47	54	52	53	58	170	1780	1330	363	153	103
4....	76	54	65	50	55	60	146	2250	1170	341	136	128
5....	76	93	62	50	58	67	148	2680	1040	320	136	115
6....	76	91	58	53	60	80	178	2700	875	328	141	113
7....	72	87	71	57	59	91	143	2680	772	337	126	126
8....	71	62	67	54	60	103	123	2920	737	294	119	103
9....	65	60	69	51	59	111	143	3240	765	278	115	93
10....	65	71	65	50	57	123	183	3700	793	286	113	86
11....	63	69	62	52	55	132	290	3340	942	290	105	78
12....	63	67	56	53	60	141	324	2930	1010	346	99	76
13....	63	71	58	56	55	143	359	3240	935	519	95	72
14....	63	76	60	60	54	136	491	3460	875	496	89	69
15....	60	74	70	59	47	132	716	3800	800	410	84	67
16....	60	76	82	57	57	128	882	3640	852	337	105	63
17....	60	74	71	60	58	136	838	3300	935	294	111	63
18....	58	76	65	56	74	136	737	3060	942	282	141	62
19....	60	65	62	62	58	119	860	2570	912	250	115	62
20....	91	62	65	59	62	99	875	3160	860	220	101	60
21....	84	69	62	53	74	107	1140	2180	905	200	91	57
22....	82	57	62	49	57	126	1360	2060	920	186	84	58
23....	76	43	63	48	58	146	1250	1900	822	178	99	84
24....	69	34	63	50	58	119	890	1540	723	168	97	89
25....	67	57	57	54	63	107	800	1420	688	155	91	76
26....	69	55	60	49	58	107	1080	1250	646	153	78	72
27....	69	52	63	46	52	95	1430	1310	590	150	74	72
28....	67	54	60	50	51	84	1200	1520	524	168	86	71
29....	62	55	57	55	....	91	1010	1840	502	211	123	82
30....	74	62	58	59	....	89	845	2010	485	173	160	115
31....	97	....	57	60	....	103	....	1630	....	168	138	....
Total	2202	2015	1946	1674	1622	3284	18877	74235	26210	8754	3516	2543
Mean.	71.0	67.2	62.8	54.0	57.9	106	629	2395	874	282	113	84.8
Max..	97	103	82	62	74	146	1430	3800	1460	519	160	128
Min..	58	34	54	46	47	57	111	935	485	150	74	57
Acre-ft.	4370	4000	3860	3320	3220	6510	37440	147200	51990	17360	6970	5040

Total run-off for water year 1936-37=291,300 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of North Fork of Gunnison River Near Somerset, Colo., for Year Ending
Sept. 30, 1938**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	115	126	48	72	65	117	136	3800	3580	1050	168	136
2....	101	123	72	76	67	132	119	2540	3400	1070	160	146
3....	97	119	101	86	65	217	132	2120	3560	898	158	168
4....	95	113	78	74	65	290	143	1780	3480	860	148	183
5....	89	103	57	72	65	155	214	1580	3300	737	141	148
6....	89	97	71	76	58	126	236	1370	3200	674	141	123
7....	86	123	84	71	58	126	181	1220	2950	653	163	132
8....	84	117	74	70	74	119	170	1120	2660	519	160	173
9....	82	99	69	71	71	121	186	1060	2390	530	153	143
10....	80	107	72	72	72	117	243	1130	2410	480	148	126
11....	78	101	76	71	80	119	278	1360	2200	431	136	146
12....	80	95	132	71	95	143	396	1820	2180	442	134	197
13....	78	91	130	67	87	186	513	2680	2680	480	160	230
14....	78	84	103	69	76	178	597	3640	2330	496	165	183
15....	165	89	93	65	89	141	491	4280	1980	442	146	160
16....	181	82	87	69	78	136	566	4300	1870	406	132	150
17....	138	87	80	67	80	163	681	3720	1710	391	126	138
18....	163	89	80	67	57	148	920	3240	1760	363	119	130
19....	143	84	45	67	74	150	1270	3220	1680	328	107	119
20....	117	91	30	67	89	178	1380	3020	1680	294	109	115
21....	113	109	40	65	78	208	1450	2700	2170	278	107	117
22....	107	105	52	65	72	163	1780	2520	2280	270	103	115
23....	109	87	72	60	76	146	2200	2230	1920	254	91	109
24....	111	91	78	60	71	170	2810	2410	1600	233	87	107
25....	115	87	78	60	65	183	3400	2700	1450	217	87	107
26....	126	67	63	60	74	189	3360	3140	1320	217	84	105
27....	136	47	82	60	89	170	2520	3500	1280	240	87	101
28....	138	95	74	62	91	192	2770	4080	1230	258	87	99
29....	136	72	66	69	....	178	3400	3520	1360	227	87	103
30....	134	47	66	69	....	150	4060	3600	1110	194	86	103
31....	132	....	76	74	....	123	....	3520	....	181	97	....
Total	3496	2827	2334	2124	2081	4934	36602	82920	66720	14113	3877	4112
Mean.	113	94.2	75.3	68.5	74.3	159	1220	2675	2224	455	125	137
Max..	181	126	132	86	95	290	4060	4300	3580	1070	168	230
Min..	78	47	30	60	57	117	119	1060	1110	181	84	99
Acre-ft.	6930	5610	4630	4210	4130	9790	72600	164500	132300	27990	7690	8160

Total run-off for water year 1937-38=448,500 acre-feet.

Discharge of Gunnison River Near Grand Junction, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	696	942	859	894	732	1000	890	3350	8110	2510	677	863
2....	729	1100	863	874	692	1050	902	4230	6830	2290	663	972
3....	719	1200	863	827	692	1110	1060	6270	6460	2740	627	760
4....	703	1140	833	746	722	1270	1190	8090	6570	1930	497	688
5....	672	955	863	791	752	1300	1110	9600	5850	1710	463	702
6....	695	1050	863	830	792	1340	977	10600	4990	1530	492	735
7....	735	1170	836	783	802	1120	1130	11000	4230	1350	616	728
8....	755	1180	886	773	772	984	1020	11200	3610	1480	655	711
9....	800	1150	900	784	732	977	876	12000	3300	2200	645	771
10....	760	1060	875	698	722	1020	862	13100	3200	1650	533	638
11....	739	1040	835	658	722	1080	917	13800	3080	1430	420	584
12....	754	1030	798	641	752	1090	1280	13200	3460	2080	355	544
13....	742	1020	774	653	792	1120	1680	12700	3820	2160	328	516
14....	758	1080	761	653	822	1150	1900	13200	4780	2250	305	491
15....	785	1070	750	663	832	1110	2560	13700	3750	2110	271	432
16....	761	1080	842	693	822	1070	2600	15000	3340	1860	260	390
17....	769	1100	920	683	812	1060	5260	15100	3440	1510	329	359
18....	757	1080	1090	682	802	1140	4540	14500	3860	1280	351	363
19....	748	1100	1060	710	822	1150	4010	13500	4100	1090	320	352
20....	879	1080	946	720	782	1100	4240	11500	3980	860	305	332
21....	1000	993	913	678	762	994	4140	9840	3760	668	287	340
22....	1070	989	891	656	782	944	3170	9360	3960	562	266	417
23....	1040	987	885	655	832	959	2320	9240	3990	468	243	516
24....	1020	974	861	664	872	1060	2960	9140	3700	409	223	491
25....	1040	898	820	692	882	1030	4420	7940	3250	406	220	495
26....	1020	849	787	660	892	996	4650	6800	3030	373	211	450
27....	924	866	798	670	912	956	5370	5790	3330	339	220	478
28....	924	878	800	690	872	946	6870	5660	3420	421	338	512
29....	915	860	809	718	....	851	5410	6500	2860	673	886	530
30....	924	854	818	745	....	870	3970	8910	2420	522	969	599
31....	1070	....	836	763	....	848	....	9770	....	658	1050	....
Total	25903	30775	26635	22347	22176	32695	82284	314590	124480	41519	14025	16759
Mean.	836	1026	859	721	792	1055	2743	10150	4149	1339	452	559
Max..	1070	1200	1090	894	912	1340	6870	15100	8110	2740	1050	972
Min..	672	849	750	641	692	848	862	3350	2420	339	211	332
Acre-ft.	51380	61040	52830	44320	43990	64850	163200	624000	246900	82350	27820	33240

Total run-off for water year 1936-37=1,496,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Gunnison River Near Grand Junction, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	825	999	966	935	817	1020	1090	16000	16200	8540	1010	974
2....	867	999	904	872	862	1100	1050	14800	15900	7350	917	1030
3....	855	999	922	894	862	1160	1020	10700	15500	6630	825	3010
4....	864	1130	1090	876	854	1730	975	9050	16300	6140	809	4070
5....	869	1050	1130	824	853	1670	1160	7620	16800	5620	829	2850
6....	745	1010	1010	807	805	1240	1710	6560	16800	4800	756	2400
7....	743	1090	1000	891	756	1030	1930	5510	16500	4150	728	2010
8....	728	1130	1070	769	759	972	1520	5040	15600	3590	795	1970
9....	712	1150	1080	787	777	956	1300	4420	13900	3170	1130	1960
10....	679	1120	1040	834	821	1020	1350	4340	12400	2900	1190	1810
11....	648	1070	1030	851	918	1020	1760	4500	12000	2690	1040	1920
12....	615	1070	1080	894	1010	1020	2000	5460	11300	2440	1060	2620
13....	604	1050	1500	917	1090	1220	2570	6740	11100	2320	1050	2900
14....	597	1020	1590	959	918	1330	3470	9070	14100	2370	1290	2600
15....	747	974	1290	908	838	1480	3790	12000	12000	2490	1430	2380
16....	1430	974	1200	959	838	1210	3050	14000	10400	2520	1240	2140
17....	1400	999	1140	1020	798	1120	3400	14600	10200	2380	1090	2030
18....	1220	982	1080	968	766	1250	4230	14000	10200	2260	936	1920
19....	1180	1020	1010	923	735	1240	6120	12800	10200	2060	790	1800
20....	1200	1040	949	908	572	1160	7700	12100	9610	1830	719	1650
21....	1160	918	825	885	706	1300	8830	11500	9940	1690	636	1530
22....	1120	1220	743	855	825	1630	9840	10300	13200	1570	580	1440
23....	1080	1200	739	805	811	1350	11100	10100	14600	1510	524	1400
24....	1090	1170	830	765	795	1220	12900	9370	13200	1500	525	1540
25....	1070	1030	810	839	771	1300	14300	9300	11700	1340	530	1140
26....	1040	1070	835	878	749	1330	15500	10100	10800	1840	554	1170
27....	1040	1050	840	879	749	1460	14600	11700	10200	1230	637	1110
28....	1040	946	828	888	815	1470	12600	13500	9440	1090	625	1020
29....	1030	931	863	902	....	1590	13500	15400	8690	1340	530	951
30....	996	1020	902	953	....	1510	14700	17300	8880	1270	559	893
31....	990	....	889	925	....	1280	....	17000	....	1130	688	....
Total	29184	31431	31185	27370	22870	39388	179065	324880	377660	91760	26022	56238
Mean.	941	1048	1006	883	817	1271	5969	10480	12590	2960	839	1875
Max..	1430	1220	1590	1020	1090	1730	15500	17300	16800	8540	1430	4070
Min...	597	918	739	765	572	956	975	4340	8690	1090	524	893
Acre-ft.	57890	62340	61850	54290	45360	78120	355200	644400	749100	182000	51610	111500

Total run-off for water year 1937-38=2,454,000 acre-feet.

Discharge of Leroux Creek Near Cedaredge, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	8.0	8.2	....	....	....	....	8.2	84	195	47	20	21
2....	8.2	6.5	....	....	....	....	9.8	163	190	44	23	18
3....	8.6	5.4	....	....	....	....	9.0	206	192	44	29	16
4....	8.8	6.2	....	....	....	....	8.2	231	165	42	25	16
5....	9.0	7.4	....	....	....	....	8.0	242	138	41	23	15
6....	9.5	9.8	....	....	....	....	9.0	235	121	36	22	14
7....	8.5	9.8	....	....	....	....	9.2	240	109	37	22	14
8....	8.2	7.6	....	....	....	....	9.8	269	111	35	22	15
9....	7.5	7.4	....	....	....	....	10	342	112	36	17	20
10....	7.5	8.0	....	....	....	....	13	496	105	37	16	18
11....	6.8	8.5	....	....	....	....	18	496	107	41	26	12
12....	6.5	9.0	....	....	....	....	18	444	107	56	19	11
13....	6.5	9.5	....	....	....	....	21	432	96	61	20	11
14....	6.3	9.8	....	....	....	Mar. 16	35	456	88	54	16	11
15....	5.9	9.8	....	....	....	to 31	55	444	81	41	13	11
16....	5.9	9.0	....	....	....	7.0	66	440	81	32	21	11
17....	6.1	9.2	....	....	....	7.5	60	458	82	28	36	13
18....	5.9	8.8	....	....	....	7.0	66	442	84	33	40	10
19....	5.7	9.5	....	....	....	7.5	72	382	72	32	29	9.0
20....	5.7	6.2	....	....	....	7.0	76	344	77	32	24	8.2
21....	5.9	6.8	....	....	....	7.0	120	368	72	35	19	8.5
22....	8.5	6.0	....	....	....	7.2	145	396	70	34	16	6.3
23....	9.5	5.9	....	....	....	7.5	125	315	69	32	19	11
24....	11	4.5	....	....	....	9.0	90	274	66	34	21	10
25....	8.5	6.0	....	....	....	7.5	102	247	67	34	22	8.0
26....	8.2	5.8	....	....	....	6.8	156	231	68	26	21	7.0
27....	7.2	5.6	....	....	....	7.8	170	235	67	24	17	6.5
28....	6.8	5.7	....	....	....	7.8	130	246	60	22	19	6.3
29....	6.3	5.8	....	....	....	7.2	98	262	52	21	26	8.0
30....	8.0	6.0	....	....	....	7.2	79	267	47	19	26	16
31....	9.0	....	....	....	....	7.8	....	233	....	19	25	....
Total	234.0	223.7	....	....	....	118.8	1796.2	9920	2951	1109	694	361.8
Mean.	7.55	7.46	....	....	....	7.42	59.9	320	98.4	35.8	22.4	12.1
Max..	11	9.8	....	....	....	9.0	170	496	195	61	40	21
Min...	5.7	4.5	....	....	....	6.8	8.0	84	47	19	13	6.3
Acre-ft.	464	444	....	....	....	236	3560	19680	5850	2200	1380	718

Total run-off for period=34,532 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Leroux Creek Near Cedaredge, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	14	12	....	....	....	....	....	170	635	98	29	21
2....	12	12	....	....	....	....	....	145	590	84	28	25
3....	10	12	....	....	....	....	....	107	660	76	31	31
4....	8.8	11	....	....	....	....	....	93	586	70	33	24
5....	7.2	8.8	....	....	....	....	....	90	529	62	32	21
6....	6.8	12	....	....	....	....	....	77	480	61	34	21
7....	6.5	9.2	....	....	....	....	....	58	412	62	37	18
8....	6.5	7.2	....	....	....	....	....	87	362	61	32	20
9....	6.5	11	....	....	....	....	Apr. 11	105	355	55	29	18
10....	6.5	12	....	....	....	....	to 30	152	350	52	28	17
11....	5.9	10	....	....	....	....	12	222	355	50	28	39
12....	6.5	10	....	....	....	....	12	294	375	50	28	46
13....	6.3	9.5	....	....	....	....	14	559	441	52	32	37
14....	6.6	9.0	....	....	....	....	15	529	317	58	29	21
15....	29	9.0	....	....	....	....	14	645	264	52	21	19
16....	30	8.2	....	....	....	....	16	665	250	48	20	17
17....	20	8.0	....	....	....	....	23	529	233	43	22	16
18....	15	9.5	....	....	....	....	44	365	218	43	23	14
19....	13	9.2	....	....	....	....	77	326	208	40	23	14
20....	12	8.5	....	....	....	....	90	277	206	39	24	13
21....	12	8.5	....	....	....	....	136	281	250	43	26	13
22....	12	9.0	....	....	....	....	141	303	255	41	26	13
23....	16	7.8	....	....	....	....	199	339	218	35	26	13
24....	17	9.8	....	....	....	....	247	339	192	34	26	13
25....	19	9.2	....	....	....	....	276	468	162	33	24	13
26....	18	8.8	....	....	....	....	287	650	140	37	24	13
27....	16	8.0	....	....	....	....	237	655	131	45	24	12
28....	15	10	....	....	....	....	283	564	115	48	22	12
29....	15	9.0	....	....	....	....	320	660	113	42	23	13
30....	14	9.5	....	....	....	....	370	655	110	39	22	12
31....	13	....	....	....	....	....	....	612	....	52	19	....
Total	396.1	287.7	....	....	....	....	2813	11021	9512	1585	825	579
Mean.	12.8	9.59	....	....	....	....	141	356	317	51.1	26.6	19.3
Max..	30	12	....	....	....	....	370	665	660	98	37	46
Min..	5.9	7.2	....	....	....	....	12	58	110	32	19	12
Acre-ft.	786	571	....	....	....	....	5580	21860	18870	3140	1640	1150

Total run-off for period=53,597 acre-feet.

Discharge of Surface Creek at Cedaredge, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.6	....	....	....	....	2.2	2.5	54	85	44	11	26
2....	5.6	....	....	....	....	2.2	2.5	83	80	36	11	19
3....	5.2	....	....	....	....	1.8	1.8	89	85	33	13	18
4....	5.2	....	....	....	....	2.9	1.3	102	87	31	14	12
5....	4.8	....	....	....	....	3.6	1.8	85	82	28	15	12
6....	6.6	....	....	....	....	2.9	3.2	75	65	34	16	11
7....	9.6	....	....	....	....	2.9	3.6	76	52	44	16	11
8....	9.6	....	....	....	....	3.2	4.4	85	44	58	14	15
9....	8.6	....	....	....	....	2.9	4.8	216	60	65	13	16
10....	8.6	....	....	....	....	2.2	5.2	456	75	46	16	14
11....	7.6	....	....	....	....	1.8	6.6	365	73	48	17	14
12....	6.6	....	....	....	....	1.8	6.1	379	75	64	14	13
13....	5.6	....	....	....	....	1.8	9.1	416	75	56	11	13
14....	5.6	....	....	....	....	1.8	14	303	71	42	18	15
15....	5.6	....	....	....	....	2.2	32	303	71	37	20	16
16....	6.6	....	....	....	....	2.2	50	310	65	37	19	19
17....	7.1	....	....	....	....	2.2	34	303	65	36	28	19
18....	6.1	....	....	....	....	2.2	30	191	70	33	31	16
19....	5.2	....	....	....	....	2.2	42	147	70	31	30	14
20....	5.2	....	....	....	....	2.2	48	126	66	44	36	13
21....	6.1	....	....	....	....	1.8	66	121	70	53	34	12
22....	8.1	*2.9	....	....	....	2.2	70	109	60	64	32	13
23....	7.6	....	....	....	....	2.2	52	98	53	66	28	17
24....	5.6	....	....	....	....	2.2	46	85	58	27	28	14
25....	6.6	....	....	....	*3.0	1.8	48	71	64	19	32	13
26....	6.6	....	....	....	....	1.8	68	75	66	14	37	11
27....	5.6	....	....	....	....	1.8	75	89	60	11	33	8.6
28....	5.6	....	....	....	....	1.8	64	102	53	16	28	8.6
29....	6.6	....	....	....	....	1.8	50	114	53	24	22	10
30....	6.8	....	....	....	....	3.2	40	106	54	24	28	11
31....	7.0	....	....	....	....	3.2	....	94	....	23	34	....
Total	202.8	105	40.3	46.5	61.6	71.0	881.9	5228	2007	1188	699	424.2
Mean.	6.54	3.5	1.3	1.5	2.2	2.29	29.4	169	66.9	38.3	22.5	14.1
Max..	9.6	....	....	....	....	3.6	75	456	87	66	37	26
Min..	4.8	....	....	....	....	1.8	1.3	54	44	11	11	8.6
Acre-ft.	402	208	80	92	122	141	1750	10370	3980	2360	1390	841

Total run-off for water year 1936-37=21,740 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Surface Creek at Cedaredge, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	11	11	....	....	....	2.6	3.8	216	122	51	27	25
2....	8.8	11	....	....	....	2.6	5.6	106	166	47	35	36
3....	10	10	....	....	....	2.6	2.9	76	309	47	35	40
4....	10	8.8	....	....	....	2.2	2.4	67	316	47	29	30
5....	8.8	6.9	....	....	....	2.2	2.4	60	276	47	29	28
6....	8.2	4.2	....	....	....	2.2	2.9	50	222	49	19	25
7....	6.2	3.4	....	....	....	2.2	2.4	42	163	49	15	22
8....	8.2	3.8	....	....	....	2.4	2.4	42	140	53	15	18
9....	8.8	6.2	....	....	....	2.4	3.8	59	124	49	21	13
10....	8.8	6.2	....	....	....	2.4	3.4	72	112	69	25	13
11....	9.4	4.7	....	....	....	2.2	3.8	88	112	76	22	28
12....	10	4.2	....	....	....	2.2	4.2	124	110	99	23	29
13....	11	4.2	....	....	....	2.2	5.6	166	197	95	27	33
14....	9.4	4.2	....	....	....	2.2	6.9	246	153	97	24	17
15....	22	4.2	....	....	....	2.2	4.2	302	112	95	24	15
16....	15	3.4	....	....	*3.1	2.0	4.7	283	100	71	22	15
17....	11	2.9	....	....	....	2.0	10	184	91	56	20	15
18....	12	2.9	....	....	....	2.0	25	144	88	42	21	13
19....	11	3.4	....	....	....	2.0	47	124	86	34	20	12
20....	11	3.4	....	....	....	2.0	38	112	89	33	25	13
21....	13	3.4	....	....	....	2.0	24	104	117	29	26	10
22....	9.4	2.9	....	*1.9	....	2.4	97	117	122	31	25	9.4
23....	9.4	2.9	....	....	....	1.1	108	129	95	39	24	8.2
24....	9.4	3.4	....	....	....	1.6	147	147	81	34	35	9.4
25....	8.2	2.9	....	....	....	1.6	246	179	71	33	42	8.8
26....	9.4	3.8	....	....	....	1.6	228	201	57	35	42	13
27....	9.4	3.8	....	....	....	1.6	166	240	53	36	43	11
28....	9.4	2.8	....	....	....	1.6	252	234	47	35	43	8.2
29....	9.4	2.6	....	....	....	1.6	258	246	60	34	42	7.5
30....	7.5	2.6	....	....	....	1.6	153	175	59	31	39	6.9
31....	6.9	....	....	....	....	2.9	....	140	....	28	35	....
Total	312.0	140.1	77.5	62.0	78.4	64.4	1860.4	4475	3850	1570	874	532.4
Mean.	10.1	4.67	2.5	2.0	2.8	2.08	62.0	144	128	50.6	28.2	17.7
Max..	22	11	....	....	....	2.9	258	302	316	99	43	40
Min..	6.2	2.6	....	....	....	1.1	2.4	42	47	28	15	6.9
Acre-ft.	619	278	154	123	156	128	3690	8880	7640	3110	1730	1060

Total run-off for water year 1937-38=27,570 acre-feet.

*Discharge measurement.

Discharge of Uncompahgre River at Colona, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	62	113	68	80	68	97	102	419	519	424	91	219
2....	62	106	67	77	64	95	120	466	529	415	86	115
3....	61	95	66	73	65	93	111	544	574	384	93	236
4....	60	91	67	70	68	82	109	549	500	343	95	232
5....	62	113	68	73	70	91	98	708	410	298	124	174
6....	86	115	69	76	72	109	111	654	328	298	261	166
7....	79	109	70	74	74	134	113	638	305	331	202	186
8....	84	98	70	72	72	156	113	737	359	313	153	170
9....	84	93	71	74	68	158	124	1100	343	298	129	166
10....	81	95	71	62	66	158	134	908	343	284	122	154
11....	78	89	71	62	68	161	158	850	500	457	98	146
12....	79	86	71	62	70	151	182	856	524	433	84	136
13....	78	86	72	62	72	126	202	987	524	397	73	129
14....	78	88	72	63	75	120	281	1090	539	367	84	118
15....	78	89	72	65	76	106	371	1160	428	324	82	115
16....	78	89	76	67	76	104	485	1130	495	284	88	118
17....	76	84	84	70	74	109	438	1080	638	254	129	96
18....	76	84	92	72	74	102	359	1090	681	226	141	78
19....	76	78	87	72	76	93	442	928	616	205	95	70
20....	102	78	84	67	73	76	442	818	554	174	95	78
21....	115	76	83	64	72	89	559	837	621	129	89	75
22....	113	76	83	60	74	109	692	895	595	104	79	78
23....	111	66	82	61	76	109	549	804	590	79	74	87
24....	111	67	78	62	80	88	442	676	529	68	76	84
25....	109	68	76	64	80	91	397	461	534	88	81	78
26....	109	70	73	62	81	91	519	424	564	88	82	70
27....	104	70	74	63	82	91	574	500	476	98	79	53
28....	102	70	75	64	80	88	476	627	442	115	462	50
29....	100	68	76	66	....	95	384	811	476	153	215	90
30....	109	67	76	68	....	86	355	725	466	117	258	390
31....	113	....	78	70	....	91	....	580	....	106	182	....
Total	2716	2577	2322	2097	2046	3349	9442	24052	15002	7654	4002	3957
Mean.	87.6	85.9	74.9	67.6	73.1	108	315	776	500	247	129	132
Max..	115	115	92	80	82	161	692	1160	681	457	462	390
Min..	60	66	66	60	64	76	98	419	305	68	73	50
Acre-ft.	5390	5110	4610	4160	4060	6640	18730	47710	29760	15180	7940	7850

Total run-off for water year 1936-37=157,100 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Uncompahgre River at Colona, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	210	118	75	68	58	100	95	986	1430	1390	311	166
2....	134	118	75	68	60	115	95	650	1250	1290	296	282
3....	104	118	77	72	62	140	115	465	1490	1310	285	532
4....	104	115	77	70	62	150	158	420	1760	1320	260	496
5....	104	104	72	68	63	125	194	390	1760	1210	250	375
6....	104	101	74	67	60	115	154	355	1660	1100	243	343
7....	106	104	74	66	57	112	128	345	1360	984	264	339
8....	98	106	74	66	57	110	122	312	1010	904	296	357
9....	90	104	74	68	58	108	125	316	853	879	296	300
10....	92	101	76	68	65	105	151	320	972	802	311	278
11....	90	101	80	68	72	112	161	350	944	680	271	415
12....	95	90	98	66	80	125	218	415	1170	638	246	395
13....	92	90	92	64	76	145	231	488	2210	631	274	385
14....	90	90	88	64	74	130	252	818	1400	624	271	319
15....	90	92	82	62	76	106	194	1140	1400	673	243	282
16....	194	90	80	60	78	125	397	1100	1560	696	226	271
17....	161	92	74	62	76	151	530	1010	1720	680	220	264
18....	164	98	72	60	76	125	570	818	1800	638	211	240
19....	141	95	68	60	78	112	740	776	1860	584	187	217
20....	138	98	64	57	82	144	810	706	2000	538	172	208
21....	141	101	64	56	78	134	912	706	2390	520	166	202
22....	141	98	66	54	78	106	1000	748	2900	479	145	181
23....	144	90	68	55	76	106	1080	602	2290	446	138	172
24....	147	95	70	56	74	138	1230	602	1910	425	131	166
25....	144	90	72	54	68	122	1150	720	1850	385	126	153
26....	144	84	68	54	70	125	920	1020	1790	375	126	150
27....	144	77	72	54	72	115	642	1220	1720	395	119	138
28....	141	84	70	56	76	122	747	1370	1480	371	113	128
29....	138	80	68	56	....	118	896	1570	1740	357	111	126
30....	128	77	66	58	....	104	1150	1440	1540	339	124	119
31....	125	....	70	60	....	109	....	1380	....	319	145	....
Total	3938	2901	2300	1917	1962	3754	15167	23558	49219	21982	6567	7999
Mean.	127	96.7	74.2	61.8	70.1	121	506	760	1641	709	212	267
Max—	210	118	98	72	82	151	1230	1570	2900	1390	311	532
Min..	90	77	64	54	57	100	95	312	853	319	111	119
Acre-ft.	7810	5750	4560	3800	3890	7450	30080	46730	97620	43600	13030	15870

Total run-off for water year 1937-38=280,200 acre-feet.

Discharge of Kannah Creek Below Intake Near Whitewater, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.9	2.3	....	....	....	0.7	5.1	13	92	26	36	6.5
2....	1.4	2.3	....	....	....	.7	6.1	24	85	22	31	6.5
3....	1.2	2.1	....	....	....	.7	2.1	34	83	19	22	4.6
4....	1.4	2.8	....	....	....	1.1	1.9	50	78	28	21	4.2
5....	1.6	3.7	....	....	....	1.2	1.9	71	67	29	15	2.8
6....	1.4	3.7	....	....	....	1.2	2.8	92	69	24	15	3.2
7....	1.2	3.2	....	....	....	1.4	2.1	97	58	24	29	5.6
8....	1.2	2.3	....	....	....	.8	1.2	127	50	24	28	6.1
9....	1.0	3.2	....	....	....	.9	1.4	165	48	36	34	7.0
10....	1.0	5.6	....	....	....	.9	3.2	217	46	38	31	6.5
11....	1.0	3.7	....	....	....	1.3	5.1	221	42	44	29	6.1
12....	1.2	4.6	....	....	....	1.3	4.6	276	40	63	24	5.1
13....	1.2	4.2	....	....	....	1.4	9.4	304	38	52	24	3.7
14....	1.0	3.2	....	....	....	1.4	12	340	36	29	21	4.2
15....	.8	3.2	....	....	....	1.4	22	425	33	22	18	4.2
16....	.8	4.2	....	....	....	2.8	24	370	31	18	21	4.6
17....	.8	4.2	....	*0.3	....	3.7	13	322	29	15	31	3.7
18....	.5	4.2	....	....	....	2.8	7.0	281	29	17	34	2.3
19....	1.4	4.2	....	....	....	3.7	13	245	29	15	31	2.3
20....	3.7	3.7	....	....	....	1.6	14	201	26	11	26	3.7
21....	3.2	4.6	....	....	....	1.4	24	197	22	6.5	22	1.4
22....	2.1	4.2	....	....	....	2.1	29	177	21	8.2	19	1.4
23....	1.9	4.2	....	....	....	1.6	22	158	19	15	17	2.8
24....	1.6	4.6	....	....	....	1.0	15	149	26	17	15	2.8
25....	1.9	4.2	....	....	*0.7	1.2	14	119	31	19	22	1.9
26....	1.9	4.0	....	....	....	1.2	22	113	31	21	21	5.6
27....	1.6	4.2	....	....	....	.8	33	122	26	22	14	4.6
28....	1.6	4.4	....	....	....	.5	22	124	21	29	14	4.2
29....	1.6	4.0	....	....	....	1.2	17	137	19	33	22	5.1
30....	2.1	3.9	....	....	....	1.2	13	137	26	42	21	4.6
31....	2.3	....	....	....	....	1.2	....	108	....	38	17	....
Total	47.5	112.9	....	....	....	44.4	362.9	5407	1251	806.7	725	127.3
Mean.	1.53	3.76	2.3	1.0	0.8	1.43	12.1	174	41.7	26.0	23.4	4.24
Max..	3.7	5.6	....	....	....	3.7	33	425	92	63	36	7.0
Min..	.5	2.1	....	....	....	.5	1.2	13	19	6.5	14	1.4
Acre-ft.	94	224	141	61	44	88	720	10720	2480	1600	1440	252

Total run-off for water year 1936-37=17,860 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Kannah Creek Below Intake Near Whitewater, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	3.7	2.8	7.4	1.4	1.7	1.6	0.5	111	355	57	27	20
2....	2.6	3.3	6.9	2.0	1.6	1.4	1.2	79	299	44	26	33
3....	3.3	3.3	6.5	2.5	1.6	3.3	.6	66	304	38	24	42
4....	2.4	2.8	3.3	2.3	1.6	2.2	.8	64	263	31	24	39
5....	2.2	2.8	5.1	2.0	1.4	1.8	1.0	62	272	28	24	16
6....	2.0	2.6	3.7	1.5	1.2	1.2	1.8	53	245	26	23	13
7....	2.0	3.3	3.3	.5	1.0	2.0	.6	46	236	24	24	10
8....	2.0	3.3	4.2	1.0	1.0	1.8	.6	42	232	22	27	10
9....	1.8	2.8	3.7	1.5	1.4	1.8	1.2	42	232	18	27	8.3
10....	1.8	2.4	2.8	2.0	2.3	1.8	2.4	51	224	18	24	9.1
11....	1.8	2.4	2.8	2.1	2.2	1.8	2.4	62	206	26	20	23
12....	1.8	2.2	5.1	1.8	2.0	2.6	4.2	74	202	28	18	28
13....	2.2	2.4	4.6	2.1	1.4	2.2	6.9	102	224	28	24	24
14....	2.2	2.8	4.2	1.4	1.5	1.8	7.4	158	194	27	21	20
15....	5.6	2.8	4.6	2.0	1.6	1.6	6.0	224	158	27	20	18
16....	5.1	3.3	3.3	2.3	1.8	1.8	7.4	268	132	30	13	15
17....	6.5	3.7	3.3	2.0	1.8	2.4	10	272	121	28	13	14
18....	8.3	3.7	2.8	2.3	1.3	2.2	18	236	105	28	13	13
19....	6.9	3.3	1.8	2.1	1.3	1.6	30	215	87	27	11	13
20....	5.6	3.3	.8	2.4	1.4	2.4	27	186	82	28	18	13
21....	4.2	3.7	.8	*2.7	1.5	2.2	27	170	121	36	20	12
22....	4.6	3.7	.8	2.2	1.6	1.4	38	190	139	39	23	13
23....	4.2	3.3	1.4	2.5	1.5	1.6	55	202	105	38	24	22
24....	3.7	3.7	1.8	2.8	1.4	2.0	66	250	87	34	21	23
25....	3.3	3.3	1.0	2.5	1.4	2.0	84	326	64	34	21	18
26....	3.3	3.7	1.3	2.0	1.6	2.2	74	410	55	33	23	12
27....	3.3	2.8	1.3	2.0	1.8	2.2	57	446	48	31	23	11
28....	3.3	4.2	1.2	2.2	1.8	2.2	71	496	46	30	21	12
29....	2.8	4.2	1.2	2.5	....	1.2	92	365	59	27	18	11
30....	2.8	5.1	1.6	2.7	....	.6	114	390	69	26	16	13
31....	2.8	....	2.0	2.0	....	.6	....	365	....	24	20	....
Total	108.1	97.0	94.6	63.3	43.7	57.5	808.0	6023	4966	935	651	528.4
Mean.	3.49	3.23	3.05	2.04	1.56	1.85	26.9	194	166	30.2	21	17.6
Max..	8.3	5.1	7.4	2.8	2.3	3.3	114	496	355	57	27	42
Min..	1.8	2.2	.8	.5	1.0	.6	.5	42	46	18	11	8.3
Acre-ft.	214	192	188	126	87	114	1600	11950	9850	1850	1290	1050

Total run-off for water year 1937-38=28,510 acre-feet.

*Discharge measurement.

Discharge of Dolores River at Dolores, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	88	120	76	54	44	38	130	1660	1760	506	209	214
2....	85	110	61	52	46	40	186	2230	1690	491	191	180
3....	81	75	58	56	43	43	198	2770	1650	427	207	182
4....	80	73	63	62	43	42	180	3170	1560	382	174	144
5....	78	108	70	62	44	43	190	3240	1350	413	184	118
6....	85	95	56	64	45	47	236	2730	1180	364	230	113
7....	81	93	58	64	40	51	217	2610	1090	374	202	130
8....	76	84	60	64	40	56	239	3080	1170	427	166	120
9....	72	78	54	64	41	62	350	3410	1190	378	148	106
10....	70	80	*48	58	42	68	490	3450	1120	452	134	90
11....	67	79	46	60	42	74	676	3550	1220	554	122	73
12....	63	75	48	56	42	82	875	3410	1280	688	105	70
13....	60	80	49	62	40	88	1060	3430	1170	608	92	65
14....	59	86	53	56	41	80	1330	3500	1110	502	87	61
15....	60	86	57	56	43	86	1870	3500	968	424	94	59
16....	60	88	62	60	42	92	2310	3320	968	371	97	52
17....	60	90	68	57	40	100	2170	3380	1020	340	120	49
18....	60	90	64	57	39	105	1960	3400	1040	306	111	47
19....	63	85	60	60	38	105	2010	2980	968	276	103	48
20....	99	80	60	47	37	105	1930	2590	912	246	89	42
21....	102	80	62	54	37	110	2460	2580	897	222	79	40
22....	93	79	64	60	38	120	2850	2590	882	200	76	40
23....	82	73	61	60	37	130	2370	2480	798	189	79	47
24....	81	60	59	54	36	130	1710	2290	704	184	75	55
25....	75	70	62	52	*35	130	1620	1890	655	184	70	51
26....	74	75	64	49	36	125	2100	1590	698	195	72	43
27....	75	78	58	*55	38	120	2540	1500	644	207	94	37
28....	67	73	56	49	38	120	1940	1700	567	284	97	36
29....	67	82	64	50	....	115	1500	2200	534	287	95	58
30....	93	61	58	47	....	115	1330	2530	518	254	90	214
31....	120	....	60	48	....	120	....	2060	....	222	139	....
Total	2376	2486	1839	1749	1127	2742	39027	84820	31313	10957	3831	2584
Mean.	76.6	82.9	59.3	56.4	40.2	88.5	1301	2736	1044	353	124	86.1
Max..	120	120	76	64	46	130	2850	3550	1760	688	230	214
Min..	59	60	46	47	35	38	130	1500	518	184	70	36
Acre-ft.	4710	4930	3650	3470	2240	5440	77410	168200	62110	21730	7600	5130

Total run-off for water year 1936-37=366,600 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Dolores River at Dolores, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	154	73	....	....	....	80	175	2980	3180	1580	170	182
2....	125	70	....	....	....	90	170	2020	2870	1340	160	287
3....	116	69	....	....	....	130	162	1600	3280	1170	150	311
4....	111	66	....	....	....	135	214	1360	3460	1040	140	345
5....	103	65	....	....	....	*112	273	1170	3320	932	137	275
6....	90	61	....	....	....	110	270	1030	3070	828	135	221
7....	81	63	....	*34	....	110	217	905	2750	740	154	224
8....	75	75	....	....	....	112	246	798	2330	656	176	240
9....	72	63	....	....	....	112	340	760	2210	609	174	226
10....	70	61	*40	....	....	112	510	766	2270	552	164	198
11....	69	63	....	....	....	120	676	897	2070	507	176	410
12....	66	58	....	....	....	115	944	1190	2200	460	180	443
13....	65	43	....	....	....	120	968	1490	2860	460	204	426
14....	62	42	....	....	....	120	897	2390	2250	474	246	311
15....	75	55	....	....	....	110	682	3180	2030	465	191	269
16....	164	46	....	....	....	140	682	3150	1960	418	162	254
17....	127	49	....	....	....	150	889	2890	1900	386	146	219
18....	110	51	....	*41	....	150	1320	2250	1960	341	133	195
19....	110	48	....	....	....	150	1870	2140	1770	311	122	191
20....	89	49	....	....	....	160	2080	1740	1580	298	112	166
21....	84	49	....	....	....	170	2510	1650	1950	287	105	156
22....	84	48	....	....	....	154	2750	1830	2410	294	98	148
23....	86	47	....	....	....	162	3130	1700	2020	287	97	140
24....	84	48	....	....	....	249	3520	1890	1700	254	102	133
25....	84	46	....	....	....	292	3810	2280	1550	234	100	130
26....	82	45	....	....	....	350	3320	2730	1470	219	107	123
27....	79	43	....	....	....	301	2170	3020	1390	221	110	117
28....	81	41	....	....	....	260	2610	3280	1300	240	102	112
29....	79	42	....	....	....	217	3050	3680	2010	219	112	114
30....	78	40	....	....	....	189	3220	3520	2090	200	132	111
31....	75	....	....	....	....	180	....	3300	....	184	146	....
Total	2830	1619	1240	1116	1148	4962	43675	63586	67216	16206	4443	6677
Mean.	91.3	54.0	40	36	41	160	1456	2051	2240	523	143	223
Max..	164	75	....	....	....	350	3810	3680	3460	1580	246	443
Min..	62	40	....	....	....	80	162	760	1300	184	97	111
Acre-ft.	5610	3210	2460	2210	2280	9840	86630	126100	133300	32140	8810	13240

Total run-off for water year 1937-38=425,800 acre-feet.

*Discharge measurement.

Discharge of Dolores River at Gateway, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	280	344	3760	2440	619	419	513
2....	270	348	3930	1910	513	371	627
3....	276	398	4720	1690	487	316	498
4....	252	551	5420	1730	451	276	348
5....	257	589	6230	1770	422	243	344
6....	238	509	6440	1570	402	322	325
7....	252	551	5630	1380	391	616	290
8....	276	619	5360	1250	378	562	238
9....	287	543	5640	1220	1110	344	190
10....	287	657	6090	1220	775	225	165
11....	293	1100	6070	1200	756	180	152
12....	282	2050	6040	1240	1490	176	144
13....	338	2560	5860	1280	2010	184	135
14....	391	3480	5780	1290	1050	167	121
15....	426	4760	5700	1170	764	160	112
16....	426	7600	5630	1060	680	188	108
17....	472	9520	5470	1060	608	196	96
18....	494	9240	5170	1080	528	322	93
19....	581	8350	4980	1130	444	357	103
20....	547	8940	4490	1120	371	273	99
21....	458	9160	3870	1080	296	200	98
22....	426	9550	3440	1060	243	171	98
23....	415	9490	3310	995	212	156	155
24....	440	7760	3170	956	190	153	196
25....	480	6000	3020	859	171	142	121
26....	440	5460	2670	834	162	136	109
27....	436	6140	2170	783	158	144	102
28....	402	6410	2150	680	282	169	97
29....	364	5420	2160	661	218	391	153
30....	338	4370	2370	623	426	1020	282
31....	335	....	2900	....	521	966	....
Total	11459	132479	139640	36341	17128	9545	6112
Mean.	370	4416	4505	1211	553	308	204
Max..	581	9550	6440	2440	2010	1020	627
Min..	238	344	2150	623	158	138	93
Acre-ft.	22730	262800	277000	72080	33970	18930	12120

Total run-off for period=699,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Dolores River at Gateway, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	284	142	132	144	167	902	472	7510	4710	2840	265	995
2....	227	139	135	158	155	699	426	6700	4600	2200	255	616
3....	182	138	162	172	180	830	408	5160	4280	1690	243	733
4....	141	134	178	206	165	2290	433	4230	4290	1390	243	846
5....	141	114	169	225	156	1390	581	3660	4660	1200	225	872
6....	144	110	147	192	139	787	1080	3210	4710	1070	293	593
7....	134	121	150	115	121	524	1020	2800	4470	1020	225	532
8....	125	138	153	106	120	398	779	2450	4140	956	240	990
9....	117	131	150	109	127	348	665	2170	3640	872	578	532
10....	112	125	155	122	142	402	714	1900	3210	822	391	385
11....	109	124	158	129	391	338	1480	1670	3040	779	265	798
12....	107	122	190	144	344	408	3050	1680	2880	684	265	2290
13....	103	121	385	160	502	524	4290	1880	2900	623	368	1580
14....	103	128	312	153	402	559	5140	2360	3550	612	521	802
15....	135	124	218	182	293	574	4120	3140	3410	635	465	589
16....	540	125	192	216	255	551	2630	4390	2820	635	348	490
17....	344	131	182	296	214	465	3330	4770	2620	635	257	419
18....	236	132	174	354	182	426	4950	4470	2610	578	188	381
19....	176	139	163	290	158	426	7610	3870	2590	536	163	319
20....	172	145	144	220	174	381	9180	3600	2420	498	150	290
21....	186	147	113	186	172	388	9070	3360	2300	451	141	270
22....	180	152	113	144	176	559	10800	2890	2860	429	134	257
23....	162	155	125	136	165	597	11100	2760	3460	412	128	255
24....	156	156	147	109	153	436	11200	2590	3150	371	129	240
25....	152	155	153	89	150	483	11400	2480	2620	368	127	223
26....	150	162	167	102	150	454	10800	2670	2400	371	121	216
27....	150	155	174	102	148	1090	8800	3100	2250	378	118	208
28....	145	144	163	104	178	912	7220	3580	2220	341	117	200
29....	141	132	158	139	....	737	7160	4020	2060	348	115	196
30....	142	139	121	165	....	642	7520	4740	2380	312	114	192
31....	142	....	115	155	....	547	....	4980	....	300	260	....
Total	5338	4080	5198	5124	5679	20067	147428	108790	97250	24356	7452	17309
Mean..	172	136	168	165	203	647	4914	3509	3242	786	240	577
Max...	540	162	385	354	502	2290	11400	7510	4710	2840	578	2290
Min...	103	110	113	89	120	338	408	1670	2060	300	114	192
Acre-ft.	10590	8090	10310	10160	11260	39800	292400	215800	192900	48310	14780	34330

Total run-off for water year 1937-38=888,700 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

GREEN RIVER BASIN

GREEN RIVER NEAR LINWOOD, UTAH

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 29, T. 3 N., R. 21 E., 2 miles south of Wyoming-Utah line, and 5 miles southeast of Linwood.

Nearest Tributary—Henry's Fork enters $\frac{1}{4}$ mile downstream.

Drainage Area—14,300 square miles. Zero of gage is 5,844.64 feet above mean sea level.

Record Available—October, 1928, to September 20, 1938.

Maximum discharge observed during period 1928-38; 15,200 second feet, June 4, 1936. Gage height 10.11 feet.

Maximum Discharge—Year 1937; 10,300 second feet, July 13, 1937. Gage height 8.30 feet.

Maximum Discharge—Year 1938; 10,000 second feet, June 10, 1938. Gage height 7.87 feet.

Accuracy—Records considered good except those for periods of ice effect November 28, 1936, to March 18, 1937, and November 19, 1937, to March 11, 1938, April 6-8, 1938, which were computed on basis of two discharge measurements, gage heights and weather records, and are fair.

Diversions for irrigation above station.

ELK RIVER AT CLARK, COLORADO

Location—Water stage recorder in Sec. 28, T. 9 N., R. 85 W., at Clark.

Drainage Area—206 square miles. Altitude, 7,300 feet above mean sea level.

Records Available—May 1, 1910, to September 30, 1922; April 23, 1930, to September 30, 1938.

Maximum daily discharge observed during period 1910-22, 1930-38; 4,470 second feet, June 6, 9, 1912.

Maximum Discharge—Year 1937; 3,200 second feet, May 18, 1937. Gage height 4.85 feet.

Maximum Discharge—Year 1938; 3,760 second feet, May 16, 1938. Gage height 5.50 feet.

Accuracy—Records considered good in 1937 and excellent in 1938, except for periods of ice effect November 24, 1936, to March 31, 1937 (computed on basis two discharge measurements and weather records), and those for period of missing gage heights April 1-26, 1937. Those for period of ice effect November 28, 1937, to April 21, 1938, computed by comparison with records for Yampa River at Steamboat Springs and Maybell, and weather records, and are fair.

Practically no diversions above station.

LITTLE SNAKE RIVER AT DIXON, WYOMING

Location—Water stage recorder in Sec. 6, T. 12 N., R. 90 W., 1 mile west of Dixon on road from Baggs to Dixon. Willow Creek enters Little Snake River $\frac{1}{8}$ mile below station.

Drainage Area—988 square miles. Zero of gage is 6,332.81 feet above mean sea level.

Records Available—1910 to 1923, March 15, 1938, to September 30, 1938.

Maximum Discharge—Year 1938; 5,880 second feet, May 19, 1938. Gage height 7.34 feet.

Accuracy—Records considered excellent.

Diversions for irrigation above station.

LITTLE SNAKE RIVER NEAR LILY, COLORADO

Location—Water stage recorder in Sec. 20, T. 7 N., R. 96 W., 6 miles north of Lily and 6 miles above mouth, at highway bridge.

Drainage Area—3,730 square miles.

Records Available—June to August, 1904; May 1, 1922, to September 30, 1938.

Maximum discharge observed during period 1904, 1922-38; 14,200 second feet, May 27, 1926. Gage height 10.5 feet.

Maximum Discharge—Year 1937; 5,820 second feet, May 20, 1937. Gage height 5.65 feet.

Maximum Discharge—Year 1938; 8,590 second feet, May 20, 1938. Gage height 6.91 feet.

Accuracy—Records considered excellent in 1937 and good in 1938, except those for period ice effect November 9-30, 1936 (computed on basis one discharge measurement, weather records), and those for period missing gage heights April 3, 1937, to May 5, July 10-31, 1937 (computed on basis of records for Yampa River at Maybell), and those for ice period December 1, 1937, to April 7, 1938, computed on basis of one discharge measurement and weather records, and those estimated September 4, 5, 6, 1938, which are fair.

Diversions for irrigation above station.

SLATER FORK NEAR SLATER, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 21, T. 12 N., R. 89 W., $1\frac{1}{2}$ miles south of Slater and about 1 mile above mouth.

Drainage Area—161 square miles.

Records Available—May, 1910, to May, 1912; June, 1931, to September 30, 1938.

Maximum discharge observed during period 1910-12, 1931-38; 1,700 second feet, May 19, 1912.

Maximum Discharge—Year 1937; 768 second feet, May 19, 1937. Gage height 7.94 feet.

Maximum Discharge—Year 1938; 1,190 second feet, May 17, 1938. Gage height 10.40 feet.

Accuracy—Records considered good for 1937 and fair for 1938. No record December 10, 1936, to March 31, 1937. Estimated records May 16-19, 1938, on basis of records of Little Snake River near Dixon, Wyoming.

Diversions for irrigation above station.

WHITE RIVER NEAR MEEKER, COLORADO

Location—Water stage recorder in Sec. 30, T. 1 N., R. 93 W., $3\frac{1}{2}$ miles east of Meeker, and 1 mile above mouth of Curtis Creek.

Drainage Area—762 square miles.

Records Available—May, 1901, to October, 1906, May, 1910, to September 30, 1938. Station maintained $2\frac{1}{2}$ miles downstream prior to October, 1913.

Maximum daily discharge observed during period 1901-6, 1910-38; 6,070 second feet, June 16, 1921.

Maximum Discharge—Year 1937; 2,300 second feet, May 19, 1937. Gage height 3.33 feet.

Maximum Discharge—Year 1938; 3,290 second feet, May 30, 1938. Gage height 3.79 feet.

Accuracy—Records considered excellent except those for period of erroneous gage heights November 17 to December 9, 1936, and those for period of ice effect December 10, 1936, to March 15, 1937, computed on basis of two discharge measurements, weather records, and records Roaring Fork at Glenwood Springs. Those for period of ice effect December 20, 1937, to February 7, February 18-28, 1938, computed on above basis, and are fair.

Diversions for irrigation above station.

WHITE RIVER NEAR WATSON, UTAH

Location—Water stage recorder in Sec. 2, T. 10 S., R. 24 E., Salt Lake Meridian, 10 miles northeast of Watson on highway to Vernal, Utah, and just below mouth of Evacuation Creek.

Drainage Area—4,020 square miles.

Records Available—April 1 to October 31, 1906; April 1, 1923, to September 30, 1938.

Maximum daily discharge observed during period 1906, 1923-1938; 8,160 second feet, July 15, 1929.

Maximum Discharge—Year 1937; 6,380 second feet, July 9, 1937. Gage height 5.86 feet, from rating curve extended above 3,500 second feet.

Maximum Discharge—Year 1938; 5,480 second feet, September 2, 1938. Gage height 5.69 feet.

Accuracy—Records considered good except for ice effect December 23, 24, December 26, 1936, to March 21, 1937 (computed on basis two discharge measurements and weather records), and December 22-23, December 25, 1937, to February 9, 1938 (computed on basis of one discharge measurement and weather records), and are fair.

Diversions for irrigation above station.

YAMPA RIVER AT STEAMBOAT SPRINGS, COLORADO

Location—Water stage recorder in Sec. 17, T. 6 N., R. 84 W., at First Street bridge in Steamboat Springs, and a quarter of a mile above Soda Creek.

Drainage Area—604 square miles. Altitude, 6,680 feet above mean sea level.

Records Available—May 3, 1904, to October 31, 1906; March 1, 1910, to September 30, 1938.

Maximum discharge observed during period 1904-6, 1910-38; 6,820 second feet, June 14, 1921. Gage height 7.08 feet.

Maximum Discharge—Year 1937; 2,980 second feet, May 30, 1937. Gage height 4.77 feet.

Maximum Discharge—Year 1938; 4,340 second feet, June 5, 1938. Gage height 5.60 feet.

Accuracy—Records considered excellent except those for period of ice effect December 2, 1936, to March 24, 1937 (computed on basis of two discharge measurements and weather reports), and for June 30 to July 3, 1937 (estimated), and those for period of ice effect December 21, 1937, to March 25, 1938, April 9-10, 1938, computed on basis of records at Meeker and Yampa at Maybell, and weather records, and are fair.

Diversions for irrigation above station.

YAMPA RIVER NEAR MAYBELL, COLORADO

Location—Water stage recorder in Sec. 2, T. 6 N., R. 95 W., at highway bridge 3 miles east of Maybell.

Drainage Area—3,410 square miles. Altitude, 5,900 feet above mean sea level.

Records Available—April 24, 1916, to September 30, 1938.

Maximum discharge observed during period 1916-1938; 17,900 second feet, May 19, 1917. Gage height 10.4 feet.

Maximum Discharge—Year 1937; 10,000 second feet, May 17, 1937. Gage height 7.34 feet.

Maximum Discharge—Year 1938; 12,070 second feet, May 19, 1938. Gage height 8.62 feet.

Accuracy—Records considered good in 1937, and excellent in 1938, except those for ice effect period or missing gage heights November 14, 1936, to April 9, 1937, December 14, 1937, to April 8, 1938, based on two discharge measurements, weather records, and partial gage heights, and are fair.

Diversions for irrigation above station.

Discharge of Green River Near Linwood, Utah, for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	636	828	460	440	350	410	1730	3180	7420	3720	1840	629
2....	629	854	480	430	350	420	2120	2790	7600	3410	1830	636
3....	636	874	470	400	360	420	2350	2580	6820	3100	1830	629
4....	629	752	480	380	360	410	2760	2660	5860	2800	1820	629
5....	636	608	460	360	360	410	3050	3300	5280	2650	1820	643
6....	643	636	500	350	370	420	2650	3900	4940	2550	1800	636
7....	629	700	550	340	370	420	2480	4370	4670	3260	1780	622
8....	629	760	550	350	360	430	2120	4830	4750	3240	1720	650
9....	622	820	525	390	350	460	1900	4900	4480	4190	1580	629
10....	615	820	500	400	330	480	1970	4880	4190	4700	1470	602
11....	615	738	460	400	340	540	2140	5300	4100	5140	1380	596
12....	602	722	430	390	350	640	3360	5240	4140	5920	1290	582
13....	589	745	450	370	360	890	4370	4960	4030	9800	1220	539
14....	582	745	450	360	370	830	4380	4770	3950	8270	1130	582
15....	596	738	450	360	350	800	4210	4560	4160	6430	1050	570
16....	608	752	460	350	330	1050	5410	4780	4180	5300	970	570
17....	608	794	460	340	340	1400	8160	5140	4450	4530	892	563
18....	608	802	450	350	360	1450	7470	5650	4530	3770	820	544
19....	608	802	430	360	370	1750	5010	6010	4240	3460	820	544
20....	678	752	430	360	360	1480	3780	6380	4380	3080	828	532
21....	902	738	430	360	360	1590	3410	6910	4740	2860	828	526
22....	1020	708	450	350	370	1570	3350	7160	4720	2630	811	520
23....	1180	664	450	340	390	1590	3440	6480	4700	2370	794	520
24....	1140	671	460	350	390	1330	3940	5790	5180	2180	768	508
25....	1030	657	460	350	390	1130	4000	5580	5410	1990	752	502
26....	950	602	460	360	390	980	3350	5890	5910	1880	730	496
27....	902	570	450	360	400	1150	2930	6640	6040	1840	708	502
28....	864	525	470	360	400	1170	2700	6860	5360	1830	685	508
29....	845	525	430	350	....	1310	2830	6640	4770	1850	664	502
30....	828	460	430	350	....	1340	3300	6430	4180	1830	678	508
31....	828	....	430	370	....	1370	....	6770	....	1840	650	....
Total	22887	21362	14365	11380	10180	29640	104670	161330	149180	111620	35958	17069
Mean.	748	712	463	367	364	956	3489	5204	4973	3601	1160	569
Max..	1180	874	550	440	400	1750	8160	7160	7600	9800	1840	650
Min..	582	460	430	340	330	410	1730	2580	3950	1830	650	496
Acre-ft.	45400	42370	28490	22570	20190	58790	207600	320000	295900	221400	71320	33860

Total run-off for water year 1936-37=1,368,000 acre-feet.

Discharge of Green River Near Linwood, Utah, for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	506	558	380	350	410	620	1010	4630	8500	6620	1950	1540
2....	494	551	380	340	430	670	1090	4870	8180	6710	1830	2980
3....	488	544	380	350	440	700	995	5380	7890	6860	1760	5410
4....	494	544	380	350	440	720	977	5460	7890	6810	1700	5010
5....	500	537	390	340	420	700	959	4890	8090	6500	1660	3870
6....	500	537	400	340	400	680	910	4210	8480	6060	1600	2730
7....	506	537	410	356	390	660	930	3780	9330	5690	1530	1940
8....	518	537	400	340	410	650	1180	3460	9630	5480	1460	1640
9....	537	530	390	340	420	640	1450	3120	9740	5120	1360	1620
10....	537	537	390	340	480	670	1520	2970	9980	4550	1300	1510
11....	544	537	420	340	495	710	1380	2730	9740	4000	1280	1940
12....	544	537	410	340	510	725	1340	2500	9180	3480	1240	1810
13....	537	537	400	340	500	770	1500	2360	8570	3140	1250	1600
14....	537	544	390	360	480	707	1740	2250	7690	2940	1180	1550
15....	537	544	380	380	440	896	2780	2250	7490	2780	1130	1570
16....	544	537	390	390	420	932	3200	2340	7580	2970	1120	1420
17....	551	524	400	380	400	1160	3540	3870	7460	2980	1100	1310
18....	565	518	400	360	370	1040	5300	5870	6740	3000	1090	1220
19....	608	470	380	340	360	959	6890	6480	6320	2940	1080	1120
20....	656	390	370	310	370	1060	7400	6280	6110	2840	1040	1060
21....	648	400	380	300	400	1190	7370	5960	6710	2790	986	1010
22....	648	410	390	300	410	1660	6470	5010	6770	2740	923	977
23....	632	400	390	320	450	1630	5790	4280	6470	2900	887	950
24....	624	390	400	340	470	1460	5410	3750	6600	2820	842	914
25....	608	380	380	350	460	1550	5310	3540	6710	2680	806	878
26....	586	400	360	350	470	1370	5230	3440	7180	2500	788	842
27....	579	390	350	350	520	1240	5280	3490	7180	2330	986	815
28....	579	400	330	350	560	1180	5350	3920	6820	2310	1280	779
29....	572	400	330	350	....	1130	5160	5040	7150	2340	1120	761
30....	565	380	340	360	....	1080	4870	6300	6600	2180	1090	743
31....	558	....	350	390	....	950	....	7470	....	2050	1060	....
Total	17302	14500	11840	10746	12325	30109	102331	131900	232780	119110	38428	51519
Mean.	558	483	382	347	440	971	3411	4255	7759	3842	1240	1717
Max..	656	558	420	390	560	1660	7400	7470	9980	6860	1950	5410
Min..	488	380	330	300	360	620	910	2250	6110	2050	788	743
Acre-ft.	34320	28760	23480	21310	24450	59720	203000	261600	461700	236300	76220	102200

Total run-off for water year 1937-38=1,533,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Elk River at Clark, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	49	72	....	....	....	....	72	173	2230	768	162	80
2....	48	61	....	....	....	....	85	227	2040	652	151	80
3....	47	40	....	....	....	....	92	286	2370	588	153	76
4....	53	82	....	....	....	....	96	416	2330	540	140	96
5....	61	64	....	*84	....	....	94	660	1670	511	127	82
6....	72	62	....	....	....	....	92	880	1480	462	138	74
7....	70	56	....	....	....	....	92	1210	1110	452	142	71
8....	70	35	....	....	....	....	91	1690	1060	467	127	68
9....	70	56	....	....	....	....	90	1990	1070	436	117	68
10....	68	58	....	....	....	....	104	2220	1130	426	108	68
11....	58	60	....	....	....	....	130	2000	1350	467	98	61
12....	51	58	....	....	....	....	160	1620	1540	570	96	57
13....	45	60	....	....	....	....	190	1690	1370	1000	93	56
14....	45	61	....	....	....	....	250	1840	1360	639	87	56
15....	45	60	....	....	....	....	300	2090	1430	442	82	55
16....	49	64	....	....	....	....	340	2260	1580	362	84	52
17....	50	61	....	....	....	....	310	2410	1750	324	113	50
18....	49	60	....	....	....	....	240	2650	1730	370	94	49
19....	47	52	....	....	....	....	250	2620	1620	301	84	49
20....	72	53	....	....	....	....	290	2310	1680	276	76	50
21....	77	56	....	....	....	....	320	2080	1780	252	71	50
22....	60	53	....	....	....	....	320	2050	1810	227	68	50
23....	58	50	....	....	....	....	270	2220	1610	208	66	76
24....	52	48	....	....	*24	....	266	2040	1410	202	66	106
25....	56	51	....	....	....	....	250	2090	1200	202	68	77
26....	56	53	....	....	....	....	280	1930	1020	199	64	70
27....	52	54	....	....	....	....	324	2000	910	202	60	66
28....	52	55	....	....	....	....	290	2280	816	196	65	64
29....	48	56	....	....	....	....	234	2240	768	199	113	60
30....	52	52	....	....	....	....	190	2540	776	179	102	57
31....	68	....	....	....	....	....	....	2490	....	182	85	....
Total	1751	1703	1550	1085	784	2170	6106	55202	44000	12301	3100	1974
Mean.	56.5	56.8	50	35	28	70	204	1781	1467	397	100	65.8
Max..	77	82	....	....	....	....	....	2650	2370	1000	162	106
Min..	45	35	....	....	....	....	....	173	768	179	60	49
Acre-ft.	3470	3380	3070	2150	1560	4300	12110	109500	87270	24400	6150	3920

Total run-off for water year 1936-37=261,300 acre-feet.

*Discharge measurement.

Discharge of Elk River at Clark, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	59	75	....	....	....	....	175	1930	1930	1000	171	119
2....	57	69	....	....	....	....	170	1210	1970	860	164	119
3....	53	69	....	....	....	....	176	960	2060	748	188	183
4....	56	68	....	....	....	....	170	716	2120	654	164	142
5....	56	48	....	....	....	....	180	600	2170	606	152	130
6....	57	56	....	....	....	....	240	504	2180	545	142	102
7....	58	69	....	....	....	....	230	454	1980	500	137	88
8....	65	51	....	....	....	....	210	438	1960	462	140	85
9....	69	64	....	....	....	....	220	483	1940	450	154	92
10....	62	68	....	....	....	....	230	572	2010	422	152	90
11....	58	66	....	....	....	....	240	676	1900	406	144	85
12....	56	64	....	....	....	....	250	876	1860	398	135	96
13....	54	62	....	....	....	....	260	1190	1860	374	132	142
14....	53	54	....	....	....	....	280	1620	1520	374	132	108
15....	78	61	....	....	....	....	320	2000	1220	378	126	88
16....	96	57	....	....	....	....	360	3110	1350	362	126	83
17....	85	57	....	....	....	....	360	2300	1520	350	117	80
18....	121	62	....	....	....	....	400	2600	1480	327	110	72
19....	88	65	....	....	....	....	420	2030	1320	296	100	66
20....	77	68	....	....	....	....	450	1500	1330	278	94	65
21....	77	77	....	....	....	....	410	1280	1560	258	88	65
22....	77	78	....	....	....	....	430	1210	1660	249	83	66
23....	83	69	....	....	....	....	504	1230	1440	222	83	65
24....	86	85	....	....	....	....	660	1810	1330	210	86	64
25....	86	74	....	....	....	....	1020	1500	1160	201	102	66
26....	83	74	....	....	....	....	1220	1720	1070	201	119	62
27....	80	86	....	....	....	....	1060	1950	1150	210	119	59
28....	78	84	....	....	....	....	1160	2200	1150	216	126	58
29....	77	80	....	....	....	....	1440	2460	1170	199	142	58
30....	75	80	....	....	....	....	1780	2120	1200	186	110	57
31....	71	....	....	....	....	....	....	1900	....	178	106	....
Total	2231	2040	2790	2852	2980	5360	15029	44649	48570	12120	3944	2655
Mean.	72.0	68.0	90	92	106	173	501	1440	1619	391	127	88.5
Max..	121	86	....	....	....	....	1780	3110	2180	1000	188	182
Min..	53	48	....	....	....	....	170	438	1070	178	83	57
Acre-ft.	4430	4050	5530	5660	5910	10630	29810	88560	96340	24040	7820	5270

Total run-off for water year 1937-38=288,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Little Snake River at Dixon, Wyo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	149	4190	3320	561	18	46
2	103	3030	3200	468	17	37
3	107	2450	3270	396	15	36
4	180	2030	3300	353	15	55
5	236	1780	3280	293	15	44
6	372	1490	3270	236	14	36
7	180	1330	3080	201	13	27
8	210	1200	2900	176	14	22
9	227	1080	2680	161	15	23
10	353	1180	2660	117	13	20
11	298	1350	2360	74	16	23
12	396	1690	2140	55	15	31
13	Mar. 15	579	2110	2030	51	15	35
14	to 31	794	2990	1900	43	15	52
15	214	754	3340	1640	40	16	46
16	185	768	4250	1540	32	15	37
17	249	832	4500	1460	38	13	34
18	176	946	4980	1410	40	12	32
19	149	1490	5500	1220	42	11	32
20	267	1440	3900	1180	35	12	30
21	302	1310	3290	1170	26	11	29
22	180	1510	2900	1200	23	10	28
23	172	1700	2750	1060	21	9.4	30
24	206	2690	2800	954	20	8.8	28
25	180	2560	2930	917	20	8.8	26
26	189	3020	3250	780	20	9.1	18
27	164	2490	3560	705	26	9.4	15
28	227	2370	3790	657	26	12	14
29	193	3010	4180	627	22	13	14
30	127	3330	4120	615	20	15	....
31	172	....	3560	....	20	15	....
Total	3352	34404	91500	56625	3656	410.5	926
Mean	197	1147	2952	1888	118	13.2	30.9
Max.	302	3330	5500	3320	72	18	55
Min.	127	103	1080	615	20	8.8	14
Acre-ft.	6650	68240	181500	112300	7250	814	1840

Total run-off for period=752,200 acre-feet.

Discharge of Little Snake River Near Lily, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	85	...	...	...	...	464	1900	3380	746	85	565
2	44	87	...	...	...	...	444	1800	3850	654	87	379
3	32	89	...	...	...	...	470	1700	3210	581	158	210
4	22	353	...	...	...	...	460	1900	2880	527	150	174
5	16	256	...	...	...	...	450	2100	3360	492	114	210
6	19	190	...	...	...	...	470	2250	3410	405	100	158
7	22	210	...	...	...	...	510	2660	2700	379	85	162
8	24	158	...	...	...	...	500	2800	2250	637	56	150
9	30	135	...	...	...	...	500	3720	2000	307	51	117
10	44	120	...	...	...	...	510	4260	1870	478	42	80
11	44	103	...	...	...	...	760	4400	1840	950	38	63
12	54	89	...	...	...	...	860	4740	1890	1860	32	56
13	56	78	...	...	...	...	820	3890	1900	2740	32	46
14	51	85	...	...	...	...	940	3680	2040	2900	30	42
15	48	85	...	...	...	...	1050	4110	2020	2370	24	38
16	48	89	...	...	...	...	1200	4980	1950	1480	22	35
17	49	78	...	...	...	...	1500	4210	1910	1010	49	33
18	49	70	...	...	...	...	1700	4420	1860	695	57	32
19	61	68	...	...	...	...	1600	4540	1890	527	97	29
20	108	63	...	...	...	...	1600	4860	1890	478	51	23
21	111	61	...	...	...	...	1700	5080	1750	398	45	22
22	108	56	...	...	...	...	1800	3770	1660	323	34	22
23	100	41	...	...	...	...	1900	3290	1610	280	25	106
24	89	41	...	...	...	Mar. 26	1800	3180	1550	251	22	72
25	85	54	...	...	...	to 31	1800	3120	1470	223	19	34
26	85	68	...	...	...	235	1700	2970	1330	194	16	33
27	85	111	...	...	...	366	1800	2910	1180	174	14	42
28	85	70	...	...	...	398	1900	2880	1100	194	19	49
29	83	76	...	...	...	451	2100	2860	970	190	135	48
30	83	85	...	...	...	431	2000	3100	854	144	206	51
31	83	...	...	...	...	485	...	3120	...	100	637	...
Total	1826.6	3154	...	...	...	2366	35248	105200	61574	22687	2532	3081
Mean	58.9	105	...	...	...	394	1175	3394	2052	732	81.7	103
Max.	111	353	...	...	...	485	2100	5080	3850	2900	637	565
Min.	8.6	41	...	...	...	235	444	1700	854	100	14	22
Acre-ft.	3620	6260	...	...	...	4690	69910	208700	122100	45000	5020	6110

Total run-off for period=471,410 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Little Snake River Near Lily, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	52	100	85	125	....	....	370	3440	4140	608	38	52
2....	44	98	95	130	....	....	370	4480	3480	580	35	520
3....	36	95	110	140	....	....	370	3830	3310	532	33	1580
4....	32	95	110	130	....	....	400	2750	3260	479	32	735
5....	32	98	105	120	....	....	430	2310	3310	405	32	474
6....	32	100	110	115	....	....	440	1950	3290	335	32	277
7....	29	100	120	112	....	....	450	1720	3320	310	32	170
8....	33	95	110	110	....	....	451	1520	3230	263	31	122
9....	35	88	105	115	....	....	345	1360	2970	225	45	128
10....	35	90	115	120	....	....	320	1250	2750	178	212	118
11....	36	98	115	125	....	....	330	1180	2540	149	37	65
12....	37	79	120	125	....	....	456	1290	2500	128	29	67
13....	37	82	130	127	....	....	416	1500	2200	108	28	145
14....	37	98	125	127	....	....	526	2060	2040	90	31	48
15....	49	98	120	130	....	....	872	2860	1890	77	25	45
16....	69	95	115	130	....	....	1000	3480	1740	72	23	48
17....	56	88	110	135	....	....	980	4480	1560	77	38	48
18....	92	90	105	138	....	....	1040	6150	1480	65	28	53
19....	92	98	105	138	....	....	1160	6260	1420	98	23	51
20....	100	90	110	136	....	....	1500	7950	1360	216	21	45
21....	115	122	115	134	....	....	1850	6280	1200	108	21	42
22....	125	112	110	130	....	....	1590	4960	1200	85	20	39
23....	125	225	110	128	....	....	1640	3230	1280	76	20	37
24....	122	277	105	125	....	....	1850	2920	1220	76	22	36
25....	118	220	110	125	....	....	2340	2910	1040	66	22	34
26....	115	152	115	125	....	....	2890	2990	952	58	20	33
27....	112	152	110	128	....	....	3370	3310	907	52	20	32
28....	108	112	110	130	....	....	2610	3620	772	48	112	31
29....	105	100	110	132	....	....	2550	3990	706	48	60	31
30....	100	77	115	135	....	....	2990	4360	713	44	62	29
31....	100	....	120	138	....	....	....	4740	....	42	131	....
Total	2210	3424	3450	3958	4340	9920	35906	105130	61780	5698	1315	5135
Mean.	71.3	114	111	128	155	320	1197	3391	2059	184	42.4	171
Max..	125	277	130	140	....	....	3370	7950	4140	608	212	1580
Min..	29	77	85	110	....	....	320	1180	706	42	20	29
Acre-ft.	4380	6790	6840	7850	8610	19680	71220	208500	122500	11300	2610	10190

Total run-off for water year 1937-38=480,500 acre-feet.

Discharge of Slater Fork Near Slater, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	10	26	14	....	....	....	32	99	471	76	16	7.6
2....	9.6	21	13	....	....	....	36	122	408	66	16	7.8
3....	9.4	13	13	....	....	....	29	154	401	51	17	8.8
4....	9.6	20	16	....	....	....	28	212	466	44	16	8.4
5....	11	28	17	....	....	....	26	265	389	34	16	7.6
6....	15	27	18	....	....	....	28	302	327	34	16	6.6
7....	14	23	20	....	....	....	27	366	277	28	16	7.4
8....	12	14	20	....	....	....	27	483	255	25	15	6.2
9....	11	21	19	....	....	....	28	514	265	30	14	6.8
10....	11	19	....	....	....	....	39	540	302	37	9.2	6.8
11....	11	21	....	....	....	....	45	540	314	56	5.0	6.0
12....	11	19	....	....	....	....	40	469	352	162	5.8	5.6
13....	10	18	....	....	....	....	46	534	311	185	6.2	4.8
14....	10	18	....	....	....	....	63	561	285	216	7.2	4.8
15....	11	18	....	....	....	....	91	570	304	128	4.2	4.4
16....	14	20	....	....	....	....	111	594	283	96	5.2	4.6
17....	14	20	....	....	....	....	91	601	296	86	18	5.2
18....	14	22	....	....	....	....	71	612	297	93	17	5.2
19....	13	18	....	....	....	....	80	639	259	76	12	5.4
20....	13	16	....	....	....	....	91	512	254	63	9.4	6.6
21....	23	17	....	....	....	....	116	444	252	52	9.2	7.2
22....	19	17	....	....	....	....	134	434	248	36	7.2	8.8
23....	16	12	....	....	....	....	95	428	230	32	5.4	15
24....	13	13	....	....	....	....	79	396	193	28	5.4	14
25....	16	15	....	....	....	....	78	374	153	25	8.4	11
26....	16	16	....	....	....	....	110	387	153	20	8.8	9.8
27....	15	15	....	....	....	....	158	388	126	17	10	9.6
28....	16	14	....	....	....	....	143	404	107	14	8.6	9.0
29....	14	13	....	....	....	....	107	392	94	15	28	9.6
30....	17	14	Dec. 1	....	....	....	90	430	86	15	18	8.8
31....	24	....	to 9	....	....	....	....	506	....	21	10	....
Total	427.6	548	150	....	....	....	2139	13272	8158	1861	360.2	229.4
Mean.	13.8	18.3	16.7	....	....	....	71.3	428	272	60.0	11.6	7.65
Max..	24	28	20	....	....	....	158	639	471	216	28	15
Min..	9.4	12	13	....	....	....	26	99	86	14	4.2	4.4
Acre-ft.	848	1090	298	....	....	....	4240	26320	16180	3690	714	455

Total run-off for period=53,835 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Slater Fork Near Slater, Colorado, for Year Ending Sept. 30, 1933

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	9.0	22	15	19	21	46	26	652	519	112	10	19
2....	9.6	22	18	19	21	42	25	407	513	92	10	23
3....	8.8	21	24	20	22	64	25	344	515	81	10	27
4....	8.6	21	21	18	22	42	33	260	506	68	10	31
5....	9.4	15	19	16	23	24	48	221	488	57	9.0	22
6....	10	17	21	16	20	18	45	188	490	53	6.9	17
7....	10	19	20	17	22	22	35	166	484	44	4.9	14
8....	10	15	19	18	23	18	29	155	445	37	7.5	13
9....	11	19	19	19	23	24	29	151	424	32	8.4	13
10....	11	22	21	19	28	22	43	187	401	28	12	13
11....	11	20	26	19	28	24	34	233	382	24	12	12
12....	12	21	42	19	29	38	52	310	365	22	8.4	14
13....	14	21	35	19	21	50	79	418	336	22	8.4	14
14....	11	20	29	19	23	36	91	543	307	21	11	14
15....	21	22	23	19	25	31	88	582	271	21	7.5	13
16....	35	20	29	19	23	33	84	946	271	20	7.0	12
17....	26	25	25	20	25	33	111	1140	266	19	6.8	12
18....	47	20	23	19	20	27	158	935	265	19	5.9	12
19....	31	13	21	19	25	30	265	674	262	17	5.0	11
20....	24	26	14	18	26	38	235	511	259	15	4.7	11
21....	23	30	15	17	25	35	250	463	234	15	5.7	10
22....	20	25	21	19	25	30	286	494	213	14	4.9	12
23....	24	17	22	18	24	31	345	476	191	13	5.0	13
24....	21	23	21	18	23	32	339	480	187	12	7.5	13
25....	20	16	21	18	24	31	406	502	165	12	10	13
26....	20	18	22	19	25	32	436	534	143	12	9.6	13
27....	19	10	23	19	26	31	353	571	134	14	9.8	13
28....	19	24	21	19	28	32	363	587	133	15	10	12
29....	20	23	19	20	..	29	466	618	127	14	14	12
30....	19	14	20	20	..	21	543	572	130	12	14	13
31....	20	..	20	20	..	29	..	522	..	11	23	..
Total	555.4	601	689	578	670	995	5322	14842	9426	948	278.9	441
Mean.	17.9	20.0	22.2	18.6	23.9	32.1	177	479	314	30.6	9.00	14.7
Max..	47	30	42	20	29	64	543	1140	519	112	23	31
Min..	8.6	10	14	16	20	18	25	151	127	11	4.7	10
Acre-ft.	1100	1190	1370	1150	1330	1970	10560	29440	18700	1880	553	875

Total run-off for water year 1937-38=70,120 acre-feet.

Discharge of White River Near Meeker, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	301	324	270	295	245	250	269	296	1710	556	320	260
2....	306	319	255	270	245	260	287	320	1510	496	310	264
3....	310	292	265	230	255	265	292	404	1690	476	287	296
4....	306	306	270	220	270	250	282	549	1540	464	269	315
5....	319	324	275	245	280	255	274	750	1280	464	260	300
6....	329	319	245	270	290	260	282	802	1130	440	300	300
7....	315	324	260	275	280	265	292	802	1020	496	287	310
8....	310	301	260	265	270	275	282	1010	865	490	269	305
9....	306	315	270	245	250	280	292	1240	833	516	282	305
10....	306	319	255	240	240	290	300	1370	818	598	296	300
11....	301	301	265	250	250	305	315	1480	889	584	250	305
12....	301	296	250	255	255	295	300	1250	1040	698	236	296
13....	296	296	240	268	270	315	310	1360	948	922	223	296
14....	296	296	260	260	290	310	335	1490	930	922	225	292
15....	296	292	290	255	280	280	399	1750	922	802	246	287
16....	301	287	310	265	260	292	476	1960	973	654	225	292
17....	301	285	290	280	265	300	410	1960	1120	563	236	287
18....	301	280	280	290	260	282	345	2010	1160	502	228	287
19....	301	275	260	280	290	292	377	2150	1040	483	218	282
20....	344	275	280	290	269	256	345	1830	982	476	211	278
21....	339	275	290	265	240	269	296	1710	905	464	211	274
22....	319	275	310	240	270	274	330	1740	849	452	211	278
23....	310	270	265	255	265	282	366	1820	802	434	211	310
24....	301	255	270	265	260	269	330	1640	742	416	211	335
25....	306	260	285	260	270	260	340	1600	705	399	211	315
26....	310	265	290	255	275	278	300	1490	728	377	208	300
27....	306	250	250	265	265	260	372	1480	647	350	211	296
28....	301	255	290	270	260	256	394	1620	591	345	228	292
29....	296	250	290	275	..	264	360	1740	742	360	246	292
30....	306	245	285	270	..	256	335	1990	535	335	264	292
31....	384	..	265	265	..	278	..	1920	..	355	256	..
Total	9574	8626	8440	8133	7419	8523	9887	43533	29646	15889	7651	8841
Mean.	309	288	272	262	265	275	330	1404	988	513	247	295
Max..	344	324	310	295	290	315	476	2150	1710	922	320	335
Min..	296	245	240	220	240	250	269	296	535	335	208	260
Acre-ft.	18990	17110	16740	16130	14720	16910	19610	86350	58800	31520	15180	17540

Total run-off for water year 1936-37=329,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of White River Near Meeker, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	296	300	269	270	250	326	308	2190	2830	1490	434	507
2....	310	305	282	290	248	330	304	1510	2830	1320	424	535
3....	300	310	292	285	248	355	290	1370	2880	1220	412	612
4....	269	310	282	275	248	345	304	1180	3050	1120	390	640
5....	260	296	282	255	248	335	326	1080	3100	1050	380	476
6....	260	292	287	240	240	326	360	966	3120	974	380	380
7....	253	325	282	225	240	317	335	886	2980	926	380	365
8....	246	296	282	220	294	312	340	814	2830	886	390	355
9....	250	296	282	235	290	322	340	766	2880	790	402	385
10....	246	292	278	250	290	317	335	798	3000	742	396	424
11....	242	287	274	245	272	317	322	838	2980	703	385	488
12....	239	278	315	245	272	330	350	966	2950	689	375	556
13....	239	274	315	*240	237	360	385	1180	3030	682	385	577
14....	250	269	282	238	237	375	452	1660	2860	682	418	470
15....	340	274	278	240	254	340	452	2210	2380	696	402	446
16....	345	264	287	245	241	330	476	2670	2210	668	390	440
17....	340	278	282	245	237	360	482	2640	2090	612	385	440
18....	440	287	282	240	230	350	549	2640	2270	598	380	424
19....	340	274	278	240	230	340	710	2360	2250	570	360	418
20....	330	287	245	235	*250	350	675	1920	2200	549	345	407
21....	320	305	240	230	248	370	535	1670	2500	549	340	407
22....	315	300	240	230	245	340	640	1760	2910	528	326	412
23....	315	269	255	235	240	345	870	1620	2570	507	326	407
24....	320	292	270	235	240	345	1120	1660	2300	494	340	407
25....	315	287	280	235	235	350	1340	1760	2070	488	340	407
26....	300	260	275	240	260	340	1490	1900	1890	488	335	402
27....	300	239	280	230	270	330	1230	2210	1790	521	350	390
28....	296	282	275	240	300	355	1280	2550	1780	577	355	385
29....	300	278	275	250	....	350	1480	3070	1800	500	360	375
30....	296	260	280	245	....	335	1820	3050	1630	507	365	370
31....	296	....	270	250	....	326	....	2910	....	458	380	....
Total	9168	8566	8596	7578	7094	10523	19900	54804	76060	22584	11630	13307
Mean.	296	286	277	244	253	339	663	1768	2535	729	375	444
Max.	440	325	315	290	300	375	1820	3070	3120	1490	434	640
Min.	239	239	240	220	230	312	290	766	1630	458	326	355
Acre-ft.	18180	16990	17050	15030	14070	20870	39470	108700	150900	44790	23070	26390

Total run-off for water year 1937-38=495,500 acre-feet.

*Discharge measurement.

Discharge of White River Near Watson, Utah, for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	352	379	304	....	....	400	374	412	1930	504	479	864
2....	357	374	278	....	....	410	374	401	1780	460	342	1130
3....	357	363	300	....	....	410	368	390	1580	442	395	608
4....	357	338	260	....	....	420	347	424	1660	430	323	824
5....	379	295	300	....	....	420	338	544	1610	430	282	648
6....	384	347	291	....	....	430	323	704	1420	412	314	1220
7....	368	347	314	....	....	440	304	824	1200	492	363	1100
8....	374	368	273	....	....	460	309	824	1070	728	318	517
9....	363	347	323	....	....	470	300	983	929	1200	278	485
10....	374	314	260	....	....	490	295	1190	856	1570	286	504
11....	363	323	209	....	....	520	295	1380	840	1320	300	511
12....	357	328	209	....	....	560	309	1570	816	1860	291	511
13....	352	318	181	....	....	600	328	1370	888	3180	256	504
14....	352	318	191	*131	....	630	323	1460	888	1810	256	479
15....	342	318	236	....	....	670	333	1550	864	1660	244	454
16....	342	314	342	....	....	700	368	1610	848	1030	244	442
17....	342	323	442	....	....	730	460	1850	848	776	323	401
18....	347	328	466	....	....	740	460	1860	904	736	406	379
19....	352	328	401	....	*327	730	401	1890	965	648	286	352
20....	696	328	333	....	....	740	374	2050	929	593	264	328
21....	504	323	282	....	....	760	363	1880	864	565	236	318
22....	424	323	278	....	....	537	374	1670	824	504	244	314
23....	368	323	270	....	....	492	430	1670	768	466	236	524
24....	347	318	260	....	....	530	448	1720	720	454	269	608
25....	342	309	260	....	....	395	424	1640	680	430	202	442
26....	338	309	260	....	....	342	390	1610	640	436	202	395
27....	347	318	280	....	....	368	384	1550	656	504	206	357
28....	352	318	280	....	....	424	406	1440	608	466	256	395
29....	347	300	270	....	....	406	454	1550	558	1050	704	309
30....	347	309	260	....	....	395	448	1670	792	1280	2350	318
31....	424	....	270	....	....	379	....	1980	....	1090	551	....
Total	11650	9848	8883	4960	8120	15998	11104	41666	29935	27526	11706	16241
Mean.	376	328	287	160	290	516	370	1344	998	888	378	541
Max.	696	379	466	....	....	760	460	2050	1930	3180	2350	1220
Min.	338	295	181	....	....	342	295	390	558	412	202	309
Acre-ft.	23110	19530	17620	9840	16110	31730	22020	82640	59380	54600	23220	32210

Total run-off for water year 1936-37=392,000 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of White River Near Watson, Utah, for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	384	366	340	290	300	668	408	2290	3160	1820	501	508
2....	335	360	302	310	310	1210	390	2720	3010	1590	468	2710
3....	325	360	298	330	315	1710	372	2050	2880	1420	444	3670
4....	310	355	290	300	340	2110	360	1780	2880	1290	438	1120
5....	302	340	290	270	350	967	350	1480	3040	1180	426	1000
6....	302	325	250	250	280	732	390	1340	3200	1080	420	788
7....	298	330	270	245	260	652	420	1200	3200	967	420	1100
8....	282	378	270	240	320	578	396	1070	3110	908	438	1120
9....	278	366	310	280	310	515	378	967	2820	860	474	876
10....	278	320	310	300	450	456	310	900	2800	804	560	700
11....	278	315	290	305	494	450	286	876	2950	756	529	716
12....	278	315	340	295	636	487	270	908	2980	700	444	1240
13....	278	306	522	287	606	724	274	1010	2820	676	480	1050
14....	278	294	414	280	543	796	320	1190	2900	836	550	812
15....	868	298	325	310	390	812	402	1780	2950	772	543	668
16....	1200	302	302	300	330	620	515	2460	2510	836	515	592
17....	620	302	298	310	310	564	592	2960	2300	780	474	628
18....	1590	298	290	310	294	613	564	3200	2130	652	456	571
19....	860	315	282	300	298	557	636	3270	2200	613	444	550
20....	501	320	266	300	340	522	756	2960	2190	606	432	522
21....	462	310	240	290	298	494	796	2500	2260	578	408	515
22....	450	315	210	285	360	571	764	2180	2390	550	408	515
23....	432	335	184	275	366	501	852	2110	2740	536	396	515
24....	408	320	166	260	408	480	994	1900	2610	494	390	508
25....	384	302	190	255	366	501	1310	1840	2340	480	480	487
26....	390	298	180	255	366	501	1700	1940	2080	462	468	501
27....	396	298	185	265	372	480	1970	2090	1900	474	480	480
28....	384	315	195	275	432	456	1620	2430	1830	571	480	468
29....	372	315	220	280	....	438	1590	2710	1950	592	474	462
30....	372	378	230	285	....	450	1830	3190	2080	536	550	450
31....	366	....	260	290	....	444	....	3430	....	508	1530	....
Total	14261	9751	8519	8827	10444	21059	21815	62733	78210	24927	15820	25842
Mean.	460	325	275	285	373	679	727	2024	2607	804	510	861
Max.	1590	378	522	330	636	2110	1970	3430	3200	1820	1530	3670
Min.	278	294	166	240	260	438	270	876	1830	462	390	450
Acre-ft.	28290	19340	16900	17510	20720	41770	43270	124400	155100	49440	31380	51260

Total run-off for water year 1937-38=599,400 acre-feet.

Discharge of Yampa River at Steamboat Springs, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	101	116	69	....	....	125	138	382	2010	220	152	81
2....	111	113	....	....	....	132	170	325	1870	200	138	79
3....	104	84	....	....	....	136	195	404	1960	175	143	79
4....	108	84	....	....	....	148	173	549	1770	167	128	83
5....	120	101	....	....	....	155	164	742	1460	149	118	104
6....	118	106	....	....	....	142	167	858	1260	138	143	101
7....	113	106	....	....	....	140	161	952	1210	133	152	86
8....	111	94	....	....	....	144	158	1100	1200	161	133	83
9....	113	101	....	....	....	146	155	1300	1090	161	118	84
10....	106	96	....	....	....	148	225	1460	1060	146	106	79
11....	101	86	....	....	....	132	271	1420	1210	208	88	77
12....	101	88	....	....	....	125	261	1330	1090	584	83	75
13....	101	88	....	....	....	128	325	1450	984	1340	75	69
14....	106	104	....	....	....	132	418	1610	968	736	71	67
15....	104	90	....	....	....	142	590	1830	1010	596	67	67
16....	101	94	....	....	....	150	722	2010	1010	442	69	60
17....	99	94	....	....	....	145	572	2010	960	329	84	54
18....	92	106	....	....	....	150	423	1930	871	351	94	51
19....	92	83	....	....	....	138	463	2000	797	271	88	47
20....	94	88	....	....	....	128	484	1790	749	228	84	49
21....	94	94	....	....	....	125	578	1710	695	198	81	47
22....	94	94	....	....	....	130	572	1740	657	176	75	47
23....	96	83	....	....	....	120	457	1700	572	167	66	45
24....	99	66	....	....	....	130	395	1580	489	140	66	66
25....	99	64	....	....	*160	111	395	1480	468	149	73	71
26....	96	67	....	....	....	120	494	1700	527	143	67	66
27....	94	73	....	....	....	128	572	1610	433	130	62	60
28....	90	75	....	....	....	120	516	1700	356	118	73	56
29....	92	67	....	*70	....	128	423	1640	296	133	108	54
30....	99	69	....	....	....	136	378	2580	250	133	113	54
31....	113	....	....	....	....	136	....	2220	....	179	96	....
Total	3171	2674	2418	2170	3080	4170	11015	45112	29282	8401	3014	2041
Mean.	102	89.1	78	70	110	135	367	1455	976	271	97.2	68.0
Max.	120	116	....	....	....	155	722	2580	2010	1340	152	104
Min.	92	64	....	....	....	111	138	325	250	118	62	45
Acre-ft.	6290	5390	4800	4300	6110	8270	21850	89480	58080	16660	5980	4050

Total run-off for water year 1936-37=231,200 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Yampa River at Steamboat Springs, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	63	130	165	169	162	200	201	2180	3270	697	132	171
2....	58	132	192	170	168	210	182	1740	3300	586	124	224
3....	63	122	168	170	172	220	179	1480	3539	493	130	313
4....	72	130	168	166	172	225	192	1260	3680	433	127	253
5....	70	117	149	159	165	235	260	1170	3760	388	122	232
6....	74	110	132	150	155	240	343	982	3700	348	117	185
7....	70	154	146	148	150	230	271	856	3380	293	107	157
8....	79	135	140	145	160	225	253	758	2960	260	107	160
9....	88	120	143	148	185	220	267	697	2560	238	114	204
10....	84	149	149	154	180	210	275	679	2630	208	140	171
11....	79	140	168	162	170	240	305	715	2480	192	132	160
12....	74	130	198	172	165	240	433	868	2270	174	124	188
13....	70	124	221	172	150	245	661	1140	2240	171	165	249
14....	65	112	198	170	150	250	868	1690	2000	192	176	214
15....	74	124	182	170	150	235	982	2020	1850	214	168	174
16....	86	122	174	169	150	230	927	2350	1820	224	162	160
17....	110	130	174	167	150	240	934	2360	1790	228	151	151
18....	104	132	157	167	145	240	934	2250	1520	256	138	140
19....	107	124	140	168	140	235	1430	2240	1370	238	124	132
20....	110	154	174	167	145	235	1150	1920	1250	204	114	132
21....	114	176	168	166	155	250	975	1680	1330	188	104	127
22....	122	192	149	165	155	235	1050	1690	1290	174	102	130
23....	135	151	142	160	160	230	1230	1650	1150	165	97	130
24....	149	162	138	158	160	230	1380	1840	1150	149	90	127
25....	154	174	140	150	160	230	1560	2110	934	143	86	132
26....	143	117	144	150	162	224	1750	2520	830	149	100	130
27....	138	97	148	150	180	218	1520	2840	752	151	110	122
28....	135	135	150	151	190	253	1420	2960	758	160	100	120
29....	146	151	155	152	....	256	1590	3460	727	160	88	114
30....	143	140	160	152	....	224	1800	3500	810	149	88	112
31....	127	....	165	155	....	208	2532	3260	....	140	110	....
Total	3106	4086	4997	4972	4506	7163	25322	56865	61091	7765	3749	5014
Mean.	100	136	161	160	161	231	844	1834	2036	250	121	167
Max..	154	192	221	172	190	256	1800	3500	3760	697	176	313
Min..	58	97	132	145	140	200	179	679	727	140	86	112
Acre-ft.	6160	8100	9910	9860	8940	14210	50230	112800	121200	15400	7440	9950

Total run-off for water year 1937-38=374,200 acre-feet.

Discharge of Yampa River Near Maybell, Colo., for Year Ending Sept. 30, 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	146	255	....	....	....	....	700	2480	7970	1570	524	296
2....	149	270	....	....	....	....	680	2250	7440	1560	485	328
3....	156	290	....	....	....	....	710	2200	6560	1510	446	252
4....	163	290	....	....	....	....	690	2430	7140	1310	418	204
5....	174	295	....	....	....	....	650	2940	7020	1150	405	190
6....	186	232	....	....	....	....	640	3770	6090	1050	382	208
7....	186	237	....	....	....	....	670	4490	4860	992	364	208
8....	194	265	....	....	....	....	660	4880	4110	944	382	224
9....	206	275	....	....	....	546	700	5910	3820	1150	387	212
10....	214	250	....	....	....	....	712	6790	3570	1380	356	196
11....	214	206	....	....	....	....	1030	7520	3350	1190	328	186
12....	210	186	....	*166	*202	....	1120	7860	3480	1140	308	182
13....	206	194	....	....	....	....	1040	7340	3860	1780	280	165
14....	194	195	....	....	....	....	1280	8200	3500	3200	264	162
15....	190	195	....	....	....	....	1680	8620	3400	3180	256	162
16....	190	205	....	....	....	....	2240	9310	3330	2250	248	154
17....	190	190	....	....	....	....	2790	9830	3880	1700	220	151
18....	186	170	....	....	....	....	2730	9940	3770	1350	240	137
19....	190	160	....	....	....	....	2280	10000	3770	1200	256	137
20....	198	150	....	....	....	....	2040	9880	3550	1080	244	124
21....	219	140	....	....	....	....	2140	8720	3910	928	232	106
22....	232	130	....	....	....	....	2340	7640	3550	800	208	106
23....	260	120	....	....	....	....	2930	6940	3970	712	193	140
24....	285	115	....	....	....	....	2670	7060	3380	656	200	162
25....	280	150	....	....	....	....	2320	6220	2860	584	196	130
26....	265	170	....	....	....	644	2100	5980	2610	506	193	140
27....	250	210	....	....	....	....	2160	5320	2490	500	190	154
28....	242	170	....	....	....	....	2700	5120	2160	490	165	168
29....	242	150	....	....	....	....	3020	5830	1880	506	179	168
30....	242	160	....	....	....	....	2780	6220	1660	506	162	168
31....	250	....	....	....	....	....	....	7200	....	572	216	....
Total	6509	6025	5580	5425	7280	18600	50202	199510	122940	37446	8927	5320
Mean.	210	201	180	175	260	600	1673	6436	4098	1208	288	177
Max..	285	295	....	....	....	....	3020	10040	7970	3200	524	328
Min..	146	115	....	....	....	....	640	2200	1660	490	162	106
Acre-ft.	12910	11950	11070	10760	14440	36890	99570	395700	243800	74270	17710	10550

Total run-off for water year 1936-37=939,600 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Yampa River Near Maybell, Colo., for Year Ending Sept. 30, 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	173	345	302	365	365	700	848	7750	9250	3240	433	345
2....	173	340	326	360	370	760	780	9220	8620	2860	404	394
3....	180	340	321	360	380	890	735	7340	8620	2440	394	692
4....	195	335	297	360	390	870	699	5940	8700	2140	369	760
5....	199	321	297	355	450	770	671	4920	9100	1920	345	772
6....	207	316	330	340	420	700	699	4270	9220	1720	350	602
7....	211	312	499	325	410	630	765	3680	9370	1540	330	546
8....	215	321	364	335	430	610	772	3060	8740	1370	326	478
9....	235	360	321	350	450	595	870	2900	7940	1250	326	408
10....	248	374	399	365	480	580	938	2570	7200	1130	335	374
11....	256	335	389	370	490	580	998	2800	7320	1030	345	394
12....	274	345	404	360	495	590	1100	3220	7200	945	364	404
13....	284	345	418	370	485	600	1240	3970	6540	892	374	438
14....	279	355	418	380	470	630	1520	5220	6480	870	355	443
15....	274	340	415	390	410	680	1920	7180	5900	930	369	514
16....	312	326	410	390	390	750	2320	8360	4800	848	399	488
17....	335	326	410	380	365	855	2610	10300	4840	892	384	413
18....	423	345	400	360	355	840	2800	11500	5160	855	360	355
19....	509	369	395	360	360	802	2920	11200	4920	885	335	335
20....	562	364	385	360	370	780	3640	11000	4310	840	312	307
21....	525	369	370	340	385	938	3930	8340	4390	772	279	284
22....	433	433	360	370	405	1080	3730	6920	4580	685	239	274
23....	399	488	390	360	425	998	4150	6390	5060	626	219	270
24....	379	448	400	340	435	998	5100	6100	4480	596	195	266
25....	360	340	410	340	470	1070	6140	6300	4240	552	188	261
26....	364	394	400	340	520	1100	6990	6920	3680	525	188	252
27....	374	355	385	340	570	1010	7480	7800	3180	493	184	248
28....	369	256	370	340	620	952	6370	8600	3060	478	252	248
29....	335	350	*360	340	....	1000	6020	9100	3050	483	195	243
30....	340	340	360	350	....	1020	6860	10200	3060	473	192	231
31....	340	....	365	360	....	990	....	10500	....	468	288	....
Total	9762	10587	11670	11055	12165	25368	85615	213570	183010	34748	9628	12029
Mean.	315	353	376	357	434	818	2854	6889	6100	1121	311	401
Max..	562	488	499	390	620	1100	7480	11500	9370	3240	433	772
Min...	173	256	297	325	355	580	671	2570	3050	468	184	231
Acre-ft. 19360	21000	23150	21930	24130	50320	169800	423600	363000	68920	19100	23860	

Total run-off for water year 1937-38=1,228,000 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

SAN JUAN RIVER BASIN

SAN JUAN RIVER NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 12, T. 36 N., R. 1 W., at bridge $\frac{1}{3}$ mile above mouth of West Fork of San Juan River and 9.5 miles northeast of Pagosa Springs.

Drainage Area—86.9 square miles.

Records Available—May, 1935, to September 30, 1937. (Data for 1938 not ready for publication because of uncertainty of highwater curve.)

Maximum discharge observed during period 1935-1937: 1,480 second feet, June 9, 1935. Maximum gage height 3.99 feet June 20, 1935.

Greatest known flood occurred October 5, 1911 (discharge not determined).

Maximum Discharge—Year 1937; 1,120 second feet, May 18, 1937. Gage height 3.45 feet.

Accuracy—Records considered good except those for period of ice effect December 1 to March 6, March 16-18 and 24-31, 1937, which were computed on basis of five discharge measurements and records for station at Pagosa Springs, and are fair.

Diversions for irrigation above station.

SAN JUAN RIVER AT PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in S $\frac{1}{2}$ Sec. 13, T. 35 N., R. 2 W., under lower highway bridge at Pagosa Springs. Prior to 1935 record was based on daily staff gage readings. Records are comparable.

Drainage Area—298 square miles.

Records Available—January, 1911, to November, 1914; May, 1935, to September 30, 1938.

Maximum discharge observed during period 1911-14, 1935-38; 4,710 second feet, June 15, 1935.

Maximum Discharge—Year 1937; 3,250 second feet, May 18, 1937. Gage height 6.26 feet.

Maximum Discharge—Year 1938; 3,970 second feet, May 29, 1938. Gage height 6.58 feet.

Accuracy—Records considered good for 1937 and excellent for 1938, except for periods of missing gage heights June 16, 17, June 27 and July 7, 1937, and for periods of ice effect December 29, 1937, to January 21, 1938, which were computed on basis of combined flow for San Juan River and West Fork near Pagosa Springs, and are fair.

Diversions for irrigation above station.

SAN JUAN RIVER AT ROSA, NEW MEXICO

Location—Water stage recorder in Sec. 21, T. 32 N., R. 5 W., at Rosa, about 230 yards above highway bridge and $\frac{1}{4}$ mile below mouth of Piedra River. From 1895 to 1899 and August 21, 1910, to September 30, 1920, a station was maintained at Arboles. For this period the San Juan River at Arboles, plus the Piedra River at Arboles, gives the total flow of San Juan at Rosa. Prior to May 13, 1937, water stage recorder located about 100 feet upstream.

Drainage Area—1,990 square miles.

Records Available—October 1, 1920, to September 30, 1938.

Maximum discharge observed during period 1930-38; about 10,400 second feet, June 21, 1935. Gage height 7.60 feet.

Maximum Discharge—Year 1937; 8,230 second feet, May 18, 1937. Gage height 6.79 feet.

Maximum Discharge—Year 1938; 9,480 second feet, May 29, 1938. Gage height 7.50 feet.

Accuracy—Records considered fair to poor. Discharges for missing or partial gage heights, October 13, 1936, to May 12, 1937, July 6-9, 20-26, 30, 31, August 1-5, 8, 9, 21-27, 30, September 3, 4, 6, 8-12, October 22 to November 3, 1937, March 5-12, 29, 31, 1938, April 1-3, May 4, 5, May 27 to June 2, 1938, and for periods of ice effect November 28 to December 3, 1937, December 19, 1937, to January 16, 1938, January 22 to February 7, 1938, computed on basis available gage heights, weather records, and records for station near Blanco.

Diversions for irrigation above station.

WEST FORK OF SAN JUAN RIVER ABOVE BORNS LAKE,
NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in Sec. 36, T. 38 N., R. 1 W., $\frac{1}{2}$ mile below Beaver Creek, $1\frac{1}{2}$ miles above Borns Lake, and 16 miles northeast of Pagosa Springs.

Drainage Area—41.2 square miles.

Records Available—April, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 1,100 second feet, June 3, 1938. Gage height 4.43 feet.

Maximum Discharge—Year 1937; 783 second feet, May 17, 1937. Gage height 4.23 feet.

Maximum Discharge—Year 1938; 1,100 second feet, June 3, 1938. Gage height 4.43 feet.

Accuracy—Records considered good except those for periods of missing gage heights. April 1-4, 13-19, and 21-25, 1937, and for period of ice effect November 29, 1937, to April 7, 1938, and from

June 8-17, which were computed on basis of five discharge measurements and on basis of records for San Juan near Pagosa Springs, and are poor.

No diversions or regulations above station.

WEST FORK OF SAN JUAN RIVER NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 12, T. 36 N., R. 1 W., on downstream side of highway bridge, 0.6 miles above mouth and 10 miles northeast of Pagosa Springs.

Drainage Area—87.9 square miles.

Records Available—April 26, 1935, to September 30, 1937; (1938 records not ready for publication).

Maximum discharge observed during period 1935-37; 2,250 second feet, June 15, 1935. Gage height 6.83 feet.

Maximum Discharge—Year 1937; 1,670 second feet, May 17, 1937. Gage height 5.04 feet.

Accuracy—Records considered good except those for periods of ice effect December 7, 1936, to March 12, March 17-20, 1937, which were computed on basis of six discharge measurements and records for station on San Juan River at Pagosa Springs, and are fair.

TURKEY CREEK NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder at west side of Sec. 10, T. 36 N., R. 1 W., $2\frac{1}{4}$ miles above mouth and 8 miles northeast of Pagosa Springs.

Drainage Area—23.0 square miles.

Records Available—May 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 602 second feet, May 28, 1938. Gage height 3.20 feet.

Maximum Discharge—Year 1937; 463 second feet, May 8, 1937. Gage height 2.95 feet.

Maximum Discharge—Year 1938; 602 second feet, May 28, 1938. Gage height 3.20 feet.

Accuracy—Records considered fair. Records for periods of ice effect December 6, 1936, to March 14, March 20, 1937, computed on basis of six discharge measurements, weather records and records for station on Navajo River at Edith and from November 26, 1937, to April 3, 1938, computed on above basis. May 3-8, June 29-30, September 10-16, 1938, on basis of record for West Fork of San Juan above Borns Lake.

Diversions for irrigation above station.

RIO BLANCO NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in center of Sec. 1, T. 34 N., R. 1 E., at highway bridge 0.3 miles above mouth of Leche Creek and 12.5 miles southeast of Pagosa Springs.

Drainage Area—58 square miles.

Records Available—May 24, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-1938; 1,340 second feet, May 17, 1937. Gage height 4.06 feet.

Maximum Discharge—Year 1937; 1,340 second feet, May 17, 1937. Gage height 4.06 feet.

Maximum Discharge—Year 1938; 1,040 second feet, June 29, 1938. Gage height 3.48 feet.

Accuracy—Records considered fair. Records for period ice effect December 6, 1936, to March 14, March 20, 1937, computed on basis of six discharge measurements, weather reports and record for Navajo River at Edith and those for period ice effect December 18, 1937, to February 21, 1938, computed on basis of one discharge measurement and records of San Juan River at Pagosa Springs. April 4-7, April 15 to June 15, 1938, computed on basis of records for Navajo at Edith.

Diversions for irrigation above station.

RITO BLANCO NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 12, T. 34 N., R. 1 W., at road crossing 0.1 mile above Sheep Cabin Creek and 7 $\frac{3}{4}$ miles southeast of Pagosa Springs.

Drainage Area—23.3 square miles.

Records Available—May 1, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 310 second feet, June 9, 1935. Gage height 2.87 feet.

Maximum Discharge—Year 1937; 240 second feet, May 13, 1937. Gage height 2.65 feet.

Maximum Discharge—Year 1938; 243 second feet, April 23, 1938. Gage height 2.73 feet.

Accuracy—Records considered good except those for periods of ice effect December 6, 1936, to March 4, 1937, and November 25, 1937, to December 2, December 20, 1937, to March 9, 1938, which were computed on basis of six and two discharge measurements, respectively, and weather records, and are fair.

Diversions for irrigation above station.

NAVAJO RIVER AT BANDED PEAK RANCH, NEAR CHROMO, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 24, T. 33 N., R. 2 E., on Banded Peak Ranch, half a mile below mouth of Aspen Creek and 9 miles northeast of Chromo.

Drainage Area—69.8 square miles.

Records Available—April 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 876 second feet, May 28, 1938. Gage height 3.42 feet.

Maximum Discharge—Year 1937; 683 second feet, May 17, 1937. Gage height 3.27 feet, from curve extended above 450 second feet.

Maximum Discharge—Year 1938; 876 second feet, May 28, 1938. Gage height 3.42 feet.

Accuracy—Records considered excellent except those for periods of missing gage heights, April 1-12, 23-29, and July 7, 8, 1937, which were computed on basis of records at Chromo and those for period of ice effect November 26, 1937, to March 25, 1938, computed on basis of one discharge measurement and record for San Juan River at Pagosa Springs, and are fair.

No diversions or regulations above station.

NAVAJO RIVER NEAR CHROMO, COLORADO

Location—Water stage recorder in SW $\frac{1}{4}$ Sec. 6, T. 32 N., R. 2 E., 3.5 miles east of Chromo.

Drainage Area—118 square miles.

Records Available—May 27, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; about 1,920 second feet, June 16, 1935. Gage height 4.46 feet.

Maximum Discharge—Year 1937; 1,200 second feet, May 15, 1937. Gage height 3.76 feet.

Maximum Discharge—Year 1938; 1,240 second feet, May 28, 1938. Gage height 3.85 feet.

Accuracy—Records considered good for 1937, excellent for 1938, except those for periods of ice effect December 8, 1936, to March 6, 1937, and November 29 to December 7, 1937, December 19, to February 23, February 25, 1938, computed on basis of six and two discharge measurements, each period, and records for station on San Juan at Pagosa Springs. March 29-30, 1938, by comparison with records for station at Edith, and are fair.

Diversions for irrigation above station.

NAVAJO RIVER AT EDITH, COLORADO

Location—Water stage recorder in NW $\frac{1}{4}$ Sec. 24, T. 32 N., R. 1 W., at highway bridge $\frac{1}{4}$ mile east of Edith and 1 mile above mouth of Coyote Creek. Prior to January 1, 1929, staff gage at same site but unknown datum.

Drainage Area—165 square miles.

Records Available—September, 1912, to December, 1928; June, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 2,370 second feet, April 15, 1937. Gage height 5.77 feet.

Maximum Discharge—Year 1937; 2,370 second feet, April 15, 1937. Gage height 5.77 feet, from rating curve extended above 1,200 second feet.

Maximum Discharge—Year 1938; 1,410 second feet, April 21, 1938. Gage height 4.57 feet.

Accuracy—Records considered good except those for periods of ice effect December 4, 1936, to March 17, 1937, and December 21, 1937, to March 11, 1938, computed on basis of five and two discharge measurements, each, and records for station on San Juan River at Pagosa Springs, and are fair.

LITTLE NAVAJO RIVER AT CHROMO, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 4, T. 32 N., R. 1 E., at highway bridge $\frac{1}{4}$ mile above mouth of Chromo.

Drainage Area—21.9 square miles.

Records Available—May 28, 1935, to September 30, 1938.

Maximum discharge observed during period 1935-38; 240 second feet (estimated), April 15, 1937.

Maximum Daily Discharge—Year 1937; 240 second feet, April 15, (estimated) 1937.

Maximum Discharge—Year 1938; 202 second feet, April 25, 1938. Gage height 4.41 feet.

Accuracy—Records considered good for 1937, fair for 1938. For periods of missing gage heights November 3-16, 1936, April 15-22, 1937, July 28 to August 1, 1937, and for periods of ice effect December 1, 1937, to March 25, 1938, computed on basis of four discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

PIEDRA RIVER AT BRIDGE RANGER STATION NEAR
PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in Sec. 22, T. 37 N., R. 3 W., $\frac{1}{4}$ mile below Bridge Ranger station, 1 mile below mouth of Middle Fork, and 15 miles northwest of Pagosa Springs.

Drainage Area—82.3 square miles.

Records Available—April 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 1,060 second feet, May 28, 1938. Gage height 3.90 feet.

Maximum Discharge—Year 1937; 776 second feet, May 16, 1937. Gage height 3.37 feet.

Maximum Discharge—Year 1938; 1,060 second feet, May 28, 1938. Gage height 3.90 feet.

Accuracy—Records considered good except those for periods of missing gage heights April 1-21, 1937, computed on basis of records for West Fork of San Juan River near Pagosa Springs, and are fair, and those for ice effect period November 26, 1937, to March 26, 1938, computed on basis of one and four discharge measurements, 14 miles below, and weather records, March 31, 1938, April 1, 2, 9, 1938, on basis of records for West Fork of San Juan River.

Diversions for irrigation above station.

WILLIAMS CREEK NEAR BRIDGE RANGER STATION NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in Sec. 10, T. 37 N., R. 3 W., at bridge $2\frac{1}{2}$ miles north of Ranger Station, $3\frac{1}{2}$ miles above mouth and 17 miles northwest of Pagosa Springs.

Drainage Area—43.7 square miles.

Records Available—May 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 687 second feet, June 29, 1938. Gage height 3.24 feet.

Maximum Discharge—Year 1937; 473 second feet, May 27, 1937. Gage height 3.02 feet.

Maximum Discharge—Year 1938; 687 second feet, June 29, 1938. Gage height 3.24 feet.

Accuracy—Records considered good for 1937 and excellent in 1938, except for period of ice effect from November 22, 1937, to March 31, 1938, computed on basis of one discharge measurement and four discharge measurements on Piedra River 14 miles below and weather records. For periods May 1-5, 7-12, July 16-22, September 26-29, October 29 to November 17, 1937, and April 1-23, April 26-30, May 6, 7, 9-14, September 8-10, 1938, on basis of records for station on Piedra River at Bridge Ranger Station, and these are fair.

WEMINUCHE CREEK NEAR BRIDGE RANGER STATION NEAR PAGOSA SPRINGS, COLORADO

Location—Water stage recorder in Sec. 5, T. 37 N., R. 3 W., $3\frac{1}{2}$ miles northwest of Bridge Ranger Station, 5 miles above mouth and 19 miles northwest of Pagosa Springs.

Drainage Area—53.4 square miles.

Records Available—April 1, 1937, to September 30, 1938.

Maximum discharge observed during period 1937-38; 651 second feet, June 29, 1938. Gage height 4.73 feet.

Maximum Discharge—Year 1937; 501 second feet, May 17, 1937. Gage height 4.16 feet.

Maximum Discharge—Year 1938; 651 second feet, June 29, 1938. Gage height 4.73 feet.

Accuracy—Records considered excellent for 1937 and fair in 1938, except for period of missing gage heights April 1-23, 1937. Records for ice period November 25, 1937, to April 8, 1938, computed on basis of four discharge measurements on Piedra River 14 miles below junction with Weminuche, and on weather records.

A few diversions for irrigation above station.

LOS PINOS RIVER NEAR WEMINUCHE PASS, COLORADO

Location—Water stage recorder in about Sec. 5, T. 39 N., R. 4 W., (township not subdivided), $1\frac{1}{2}$ miles below Weminuche Pass, 6 miles southwest of Rio Grande Reservoir dam, and 26 miles south of Lake City.

Drainage Area—10 square miles.

Records Available—June 7 to October, 1937 (discontinued).

Maximum discharge observed during period, 39 second feet, June 17, 1937. Gage height 1.79 feet.

Trans-mountain diversion above station to Rio Grande Basin.

LOS PINOS RIVER BELOW SNOWSLIDE CANON NEAR WEMINUCHE PASS, COLORADO

Location—Water stage recorder in Sec. 5, T. 39 N., R. 4 W., $3\frac{1}{4}$ miles south of Weminuche Pass and 8 miles south of Rio Grande Reservoir.

Records Available—October, 1937, to September 30, 1938.

Maximum Discharge—Year 1938; 650 second feet, May 29, 1938. Gage height 3.26 feet.

Accuracy—Records considered excellent except record for period October 1-11, 1937, by comparison with station near Weminuche Pass (discontinued October 11, 1937) for period May 23-28, May 31 to June 9 on basis of one discharge measurement and record for Weminuche Creek near Bridge Ranger Station.

Diversions for trans-mountain diversion above station to Rio Grande Basin.

PINE OR LOS PINOS RIVER NEAR BAYFIELD, COLORADO

Location—Water stage recorder in Sec. 26, T. 36 N., R. 7 W., 9 miles north of Bayfield and $\frac{1}{4}$ mile below Red Creek.

Drainage Area—284 square miles. Altitude, 7,500 feet above mean sea level.

Records Available—October 26, 1937, to September 30, 1938.

Maximum mean daily discharge observed during period 1927-1938; 5,070 second feet May 26, 1926. (Greatest known flood occurred October 5, 1911. Discharge not determined.)

Maximum Discharge—Year 1937; 2,850 second feet, May 14, 1937. Gage height 5.06 feet.

Maximum Discharge—Year 1938; 3,960 second feet, June 29, 1938. Gage height 6.30 feet.

Accuracy—Records considered excellent except those for January 1 to February 20, 1937, which are good. Discharge for periods of ice effect, January 10, 11, February 1, 1937, and of missing gage heights July 12, 13, 1937, computed on basis of records for Animas River at Durango. For period of ice effect December 9-19, 1937, computed on basis of weather records, and September 6 to 16, 1938, by comparison with Florida River near Durango.

Diversions for irrigation above station. Natural regulation by numerous lakes.

PINE OR LOS PINOS RIVER AT IGNACIO, COLORADO

Location—Water stage recorder in Sec. 5, T. 33 N., R. 7 W., $\frac{3}{4}$ mile above Ignacio and about 2 miles above Rock Creek.

Drainage Area—448 square miles.

Records Available—April 22, 1899, to October 31, 1903; September 1, 1910, to November 30, 1912; March 10, 1913, to September 30, 1938.

Maximum discharge observed during period 1910-14; 1930-38; 5,570 second feet, August 27, 1932. Gage height 6.19 feet.

Maximum Discharge—Year 1937; 2,950 second feet, May 15, 1937. Gage height 4.92 feet.

Maximum Discharge—Year 1938; 3,940 second feet, June 29, 1938. Gage height 5.39 feet.

Accuracy—Records considered good except those for period of ice effect December 28, 1936, to March 8, 1937, and periods of missing gage heights April 10-12, August 29-31, 1937, which were computed on basis of five discharge measurements, weather records and records Animas River at Cedar Hill, N. M., and are poor. Records for period of ice effect November 29, 30, December 1, 19-31, 1937, January 1-31, 1938, February 1-10, 18, 19, and for periods of missing gage heights September 5-7, 11-14, 16-18, 1938, computed on above basis and are poor.

Diversions for irrigation above station.

ANIMAS RIVER AT HOWARDSVILLE, COLORADO

Location—Water stage recorder in Sec. 12, T. 41 N., R. 7 W., 0.4 miles southwest of Howardsville, and $\frac{1}{2}$ mile below mouth of Cunningham Creek.

Drainage Area—55.9 square miles. Zero of gage is 9,617.98 feet above mean sea level.

Records Available—May 1, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38; 1,700 second feet, June 21, 1938. Gage height 3.50 feet.

Maximum Discharge—Year 1937; 889 second feet, May 16, 1937. Gage height 2.57 feet.

Maximum Discharge—Year 1938; 1,700 second feet, June 21, 1938. Gage height 3.50 feet.

Accuracy—Records considered good except for periods of ice effect, November 2-30, 1936, May 1-6, 1937, computed on basis of one discharge measurement and records for West Fork San Juan near Pagosa Springs. Records for missing gage heights October 27 to November 12, 1937, April 1-3, 13-30, 1938, May 10-13, 1938, and for periods of ice effect November 23, 25-28, 1937, computed on basis of records for adjacent stations.

No diversions above station.

ANIMAS RIVER AT DURANGO, COLORADO

Location—Water stage recorder in Sec. 20, T. 35 N., R. 9 W., at Western Colorado Power Company's plant in Durango, and $\frac{1}{2}$ mile above mouth of Lightner Creek.

Drainage Area—692 square miles. Zero of gage is 6,503.28 feet above mean sea level.

Records Available—June 20, 1895, to December 31, 1905; January 1, 1910, to September 30, 1938.

Maximum discharge observed during period 1895-1905; 1910-1938; about 25,000 second feet, October 5, 1911. Gage height 13.6 feet, from rating curve extended above 7,000 second feet. Discharge for flood June 29, 1937, about 14,000 second feet. Gage height about 9.6 feet.

Maximum Discharge—Year 1937; 4,970 second feet, May 18, 1937. Gage height 5.17 feet.

Maximum Discharge—Year 1938; 7,180 second feet, June 30, 1938. Gage height 6.15 feet.

Accuracy—Records considered excellent except those for December 1, 1936, to February 15, 1937, and April 12-20, 1938, which are good.

Diversions for irrigation above station. Regulation of flow for power and by numerous lakes.

CEMENT CREEK NEAR SILVERTON, COLORADO

Location—Water stage recorder in Sec. 31, T. 42 N., R. 7 W., at Yukon Mine, 3 miles northwest of Silverton.

Drainage Area—13.5 square miles.

Records Available—May, 1936, to September 30, 1937. (Discontinued.)

Maximum discharge observed during period 1936-37; 547 second feet, July 18, 1936. Gage height 4.45 feet, by slope area method.

Maximum Discharge—Year 1937; 218 second feet, May 15, 1937. Gage height 3.46 feet.

Accuracy—Records considered good except those for April 30, 1937, May 1 to June 1, 1937, which are fair. Those for period of ice effect November 4-30, 1936, and of missing gage heights May 1-6, 9-12, May 28 to June 1, 1937, computed on basis of one discharge measurement and records for Animas River at Howardsville.

No diversions above station that are not returned to creek.

MINERAL CREEK NEAR SILVERTON, COLORADO

Location—Water stage recorder in Sec. 13, T. 41 N., R. 8 W., 300 feet above mouth of Bear Creek and 2 miles west of Silverton.

Drainage Area—43.9 square miles.

Records Available—May 1, 1936, to September 30, 1938.

Maximum discharge observed during period 1936-38, 1,700 second feet, June 29, 1938. Gage height 4.69 feet.

Maximum Discharge—Year 1937; 765 second feet, May 17, 1937. Gage height 3.39 feet.

Maximum Discharge—Year 1938; 1,700 second feet, June 29, 1938. Gage height 4.69 feet.

Accuracy—Records are good except those for periods of ice effect and missing gage heights, November 2-23, 1936, May 1-6, 1937, and June 29 to July 15, 1937, computed on basis of record for Animas River at Howardsville, and are fair. Records for period of missing gage heights October 28 to November 12, 1937, April 1-3, 12-30, 1938, May 1, 10-14, August 2-4, 1938, and for period of ice effect November 28-30, 1937, computed on basis of records for adjacent stations, and are fair.

No diversions above station.

CASCADE CREEK NEAR TACOMA, COLORADO

Location—Water stage recorder in Sec. 11, T. 39 N., R. 9 W., near Power Company caretaker's house where Durango-Silverton, U. S. Highway No. 550 crosses Cascade Creek, 10 miles north of Tacoma.

Drainage Area—26.8 square miles. Altitude, 8,853 feet above mean sea level.

Records Available—January 1, 1915, to September 30, 1938.

Complete records furnished by the Western Colorado Power Company.

No diversions above station.

LIGHTNER CREEK NEAR DURANGO, COLORADO

Location—Water stage recorder in Sec. 26, T. 35 N., R. 10 W., 3 miles west of Durango at concrete highway bridge.

Drainage Area—64 square miles.

Records Available—July 1, 1927, to September 30, 1938.

Maximum discharge observed during period 1927-1938; 1,830 second feet, June 26, 1937; by slope area method. Gage height 5.00 feet, from flood marks.

Maximum Discharge—Year 1937; 1,830 second feet, June 26, 1937. Gage height 5.00 feet.

Maximum Discharge—Year 1938; 374 second feet, April 19, 1938. Gage height 2.23 feet.

Accuracy—Records considered fair. Those for ice effect periods, December 18, 1936, to March 8, 1937, and from November 27, 1937, to March 1, 1938, were estimated, and are poor.

Diversions for irrigation above station.

FLORIDA RIVER NEAR DURANGO, COLORADO

Location—Water stage recorder in Sec. 4, T. 35 N., R. 8 W., 10½ miles northeast of Durango and just below mouth of Red Creek. During period of record this station has been located at several different sites in same vicinity. Prior to October 1, 1934, station was located ¼ mile downstream; different datum. All records are comparable.

Drainage Area—96 square miles. Zero of gage is 7,303.58 feet above mean sea level.

Records Available—May 21 to July 31, 1899; April 1, 1901, to October 5, 1903; September 8, 1910, to September 30, 1924; April 1, 1927, to September 30, 1938.

Maximum discharge observed during period 1899, 1901-3, 1910-24, 1927-38; 4,640 second feet, June 28, 1927. Gage height 4.50 feet, former site and datum. Greatest known flood occurred October 5, 1911. (Discharge not determined.)

Maximum Discharge—Year 1937; 801 second feet, May 13, 1937. Gage height 3.17 feet.

Maximum Discharge—Year 1938; 1,170 second feet, May 28, 1938. Gage height 3.86 feet.

Accuracy—Records considered good except for periods of ice effect and missing gage heights, December 3, 1936, to March 20, 1937, April 12-14, November 25, 1937, to March 6, 1938, which were computed on basis of three discharge measurements, weather records, and records for Los Pinos River near Bayfield, and are fair.

Diversions for irrigation above station.

LA PLATA RIVER AT HESPERUS, COLORADO

Location—Water stage recorder in Sec. 14, T. 35 N., R. 11 W., at weir $\frac{1}{8}$ mile west of Hesperus.

Drainage Area—37 square miles. Altitude, 8,100 feet above mean sea level.

Records Available—June 15 to August 11, 1904; April 1, 1906, to August 11, 1908; August 24 to December 31, 1910; May 25, 1917, to September 30, 1938.

Maximum discharge observed during period 1904, 1906, 1910, 1917-38; 1,460 second feet, June 28, 1927. Gage height 4.60 feet, former datum.

Maximum Discharge—Year 1937; 592 second feet, May 16, 1937. Gage height 2.94 feet.

Maximum Discharge—Year 1938; 658 second feet, May 30, 1938. Gage height 2.92 feet.

Accuracy—Records considered good except those for periods of ice effect, November 28, 1936, to March 31, 1937, and November 28, 1937, to March 24, 1938, which were computed on basis of six discharge measurements and weather records, and are fair.

Diversions for irrigation above station.

LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

Location—Water stage recorder in Sec. 10, T. 32 N., R. 13 W., 300 feet south of Colorado-New Mexico State Line at Hill ranch and 3 miles north of Pendleton, New Mexico.

Drainage Area—331 square miles. Zero of gage is 5,975.15 feet above mean sea level.

Records Available—February 19, 1920, to September 30, 1938.

Maximum discharge observed during period 1920-38; 4,750 second feet, August 24, 1927. Gage height 11.36 feet (revised, present datum).

Maximum Discharge—Year 1937; 1,830 second feet, July 29, 1937. Gage height 6.60 feet.

Maximum Discharge—Year 1938; 512 second feet, September 3, 1938. Gage height 3.10 feet.

Accuracy—Records considered good except those for periods of ice effect, December 30, 1936, to February 25, 1937, computed on basis of two discharge measurements and weather records, and those for June 8-13, 1937, estimated. Records for ice effect period December 11, 1937, to January 23, 1938, computed on basis of three discharge measurements and weather records and those for February 11, 12, 1937, and July 27 to August 30, 1938, were estimated and are fair.

Diversions for irrigation above station.

CHERRY CREEK NEAR RED MESA, COLORADO

Location—Water stage recorder in Sec. 7, T. 33 N., R. 12 W., $\frac{1}{2}$ mile above mouth and 2 miles northwest of Red Mesa.

Drainage Area—66 square miles.

Records Available—March 21, 1928, to September 30, 1938.

Maximum discharge observed during period 1928-1938; 803 second feet, August 26, 1934. Gage height 4.50 feet, from flood marks.

Maximum Discharge—Year 1937; 608 second feet, April 15, 1937. Gage height 3.95 feet.

Maximum Discharge—Year 1938; 407 second feet, September 3, 1938. Gage height 3.20 feet.

Accuracy—Records considered fair. Those for periods of ice effect October 17, 1936, to March 23, 1937, and December 1, 1937, to March 8, 1938, computed on basis of two discharge measurements and weather records. Those for May 13, August 20, 25, 1937, estimated.

Diversions for storage and irrigation above station.

EAST MANCOS RIVER NEAR MANCOS, COLORADO

Location—Water stage recorder in NE $\frac{1}{4}$ Sec. 24, T. 36 N., R. 13 W., 800 feet above mouth and 4 miles northeast of Mancos.

Drainage Area—11.1 square miles.

Records Available—March 1 to September 30, 1938.

Maximum Discharge—Year 1938; 145 second feet April 28, 1938. Gage height 1.46 feet.

Accuracy—Records considered fair.

Diversions for irrigation above station.

MIDDLE MANCOS RIVER NEAR MANCOS, COLORADO

Location—Water stage recorder in SE $\frac{1}{4}$ Sec. 13, T. 36 N., R. 13 W., just above bridge on road to Red Arrow Mine, 500 feet above mouth and 4 miles northeast of Mancos.

Drainage Area—13.7 square miles.

Records Available—March 1 to September 30, 1938.

Maximum Discharge—Year 1938; 131 second feet, May 17, 1938. Gage height 2.64 feet.

Accuracy—Records considered good except for staff gage readings from March 1, 1938, to April 27, May 15, 16, 26-31, which are fair.

Diversions for irrigation above station.

WEST MANCOS RIVER NEAR MANCOS, COLORADO

Location—Water stage recorder in Sec. 14, T. 36 N., R. 13 W., 1½ miles above mouth and 3½ miles northeast of Mancos.

Drainage Area—42.1 square miles.

Records Available—April 26 to September 30, 1938.

Maximum Discharge—Year 1938; 380 second feet, June 29, 1938. Gage height 2.93 feet.

Accuracy—Records considered good except those for June 18, 19, 20, which were computed by comparison of records of Mancos at Mancos and East and Middle Mancos river near Mancos, and are fair.

Diversions for irrigation above station.

MANCOS RIVER NEAR MANCOS, COLORADO

Location—Water stage recorder in Sec. 23, T. 36 N., R. 13 W., just below the junction of the Middle and West Forks of Mancos River, and 2 miles east of Mancos.

Drainage Area—73 square miles.

Records Available—October 1, 1931, to September 30, 1938 (discontinued).

Maximum discharge observed during period 1931-38; 892 second feet, May 4, 1937. Gage height 3.45 feet.

Maximum Discharge—Year 1937; 892 second feet, May 4, 1937. Gage height 3.45 feet.

Maximum Discharge—Year 1938; 662 second feet, June 29, 1938. Gage height 3.43 feet.

Accuracy—Records considered fair. Those for periods of ice effect, November 8, 20-22, 24-28, December 2, 1936, to March 8, 1937, and December 11, 1937, to March 6, 1938, were computed on basis of three discharge measurements and weather records. Those for April 2-7, 1937, and November 6-8, 24-26, 1937, and March 9, 31, April 1-2, 1938, were estimated.

Diversions for irrigation above station.

MANCOS RIVER NEAR TOWAOC, COLORADO

Location—Water stage recorder in Sec. 15, T. 32 N., R. 18 W., at Mancos River Trading Post, 12 miles south of Towaoe. Prior to August 9, 1937, datum 0.70 foot higher.

Drainage Area—558 square miles.

Records Available—February, 1921, to September 30, 1938.

Maximum discharge observed during period 1921-38; 4,900 second feet, August 26, 1934, by slope-area method. Gage height 6.55 feet, present datum.

Maximum Discharge—Year 1937; 2,350 second feet, July 28, 1937. Gage height 5.30 feet.

Maximum Discharge—Year 1938; 1,780 second feet, August 31, 1938. Gage height 4.52 feet.

Accuracy—Records considered fair, October 1, 1936, to March 31, 1937, and good for April 1, 1937, to September 30, 1938, except for period of ice effect and missing gage heights May 19-25, August 9-17, 1938, computed by comparison of records at Mancos.

Diversion for irrigation above station.

Discharge of San Juan River Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	39	50	24	22	18	20	45	340	712	316	55	44
2....	37	43	21	20	18	18	64	470	745	304	54	41
3....	36	30	22	22	21	20	63	610	720	278	50	42
4....	35	33	24	22	19	22	54	714	696	252	47	39
5....	34	40	26	24	21	24	53	738	610	230	45	37
6....	39	42	17	19	18	21	60	650	499	217	48	36
7....	35	35	21	19	17	22	54	672	485	186	42	44
8....	34	32	22	21	15	28	60	770	535	176	40	34
9....	33	32	20	22	21	28	85	868	572	160	38	25
10....	32	35	18	19	20	36	117	913	572	148	36	23
11....	30	36	19	20	22	55	194	949	632	243	35	22
12....	29	36	20	22	24	66	285	935	640	217	33	21
13....	29	37	20	24	24	46	364	971	617	166	31	20
14....	28	39	22	24	22	36	428	998	579	148	27	20
15....	27	58	24	22	20	29	561	998	550	125	29	19
16....	27	55	26	20	18	28	603	944	572	116	42	19
17....	26	52	26	21	18	34	491	989	610	106	44	19
18....	25	48	18	20	17	38	400	1060	625	102	44	19
19....	26	43	18	21	16	26	414	1020	594	93	42	18
20....	40	38	22	20	18	23	414	989	564	81	34	18
21....	38	37	24	24	15	28	540	962	579	77	32	18
22....	36	34	18	27	15	32	575	926	542	71	31	17
23....	36	29	19	27	18	42	484	908	506	68	31	19
24....	36	24	22	27	19	35	358	804	451	65	28	19
25....	35	24	24	25	20	31	388	704	418	66	28	19
26....	34	24	24	22	22	33	526	579	405	77	41	19
27....	32	23	18	21	22	36	582	535	339	66	45	18
28....	30	22	27	21	22	31	477	542	310	71	42	18
29....	29	24	21	22	...	30	358	680	299	75	39	25
30....	52	22	20	23	...	28	302	737	304	64	45	91
31....	59	...	22	20	...	35	...	745	...	59	66	...
Total	1058	1077	669	683	540	981	9399	24720	16282	4423	1244	823
Mean.	34.1	35.9	21.6	22.0	19.3	31.6	313	797	543	143	40.1	27.4
Max..	59	58	27	27	24	66	603	1060	745	316	66	91
Min..	25	22	17	19	15	18	45	340	299	59	27	17
Acre-ft.	2100	2140	1330	1350	1070	1950	18640	49030	32290	8770	2470	1630

Total run-off for water year 1936-37=122,800 acre-feet.

Discharge of San Juan River Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	44	18	13	14	12	16	50	704	1020	451	66	54
2....	32	17	14	14	12	16	39	465	953	387	62	84
3....	28	16	17	13	12	30	41	362	935	356	62	68
4....	30	15	15	13	12	45	59	278	989	316	63	77
5....	26	14	14	12	12	24	75	230	980	262	66	81
6....	24	13	13	11	11	20	75	201	953	234	59	75
7....	24	17	14	12	12	18	63	172	899	204	58	71
8....	22	17	14	12	12	18	57	151	856	190	58	91
9....	22	16	13	12	12	17	63	151	770	179	53	...
10....	21	17	15	12	12	18	90	154	712	169	48	...
11....	20	16	15	12	13	20	130	197	704	145	55	...
12....	20	15	16	12	15	23	183	283	779	148	71	...
13....	20	16	15	13	17	22	179	362	864	135	90	...
14....	20	16	14	13	16	22	160	632	787	135	128	...
15....	37	17	13	13	15	19	125	821	754	157	83	...
16....	46	19	12	13	14	22	128	838	704	142	67	...
17....	36	18	13	13	13	26	172	770	704	128	59	...
18....	34	17	12	12	13	25	327	680	680	120	57	...
19....	26	16	10	12	14	29	418	610	617	116	52	...
20....	25	16	11	11	16	40	485	485	602	118	47	...
21....	24	14	12	11	15	50	640	492	672	102	44	...
22....	24	15	12	13	14	42	696	528	728	93	42	...
23....	24	15	12	13	14	36	770	499	696	84	42	...
24....	24	15	12	12	13	51	796	506	557	83	42	...
25....	23	16	13	12	13	78	821	572	521	80	47	...
26....	22	15	13	12	14	93	696	640	506	77	48	...
27....	22	14	14	13	14	73	564	787	492	83	44	...
28....	22	15	13	13	14	65	656	1020	458	96	43	...
29....	21	15	13	13	...	55	762	1220	632	83	48	...
30....	20	14	13	13	...	45	821	1060	564	70	49	...
31....	20	...	13	12	...	52	...	953	...	67	47	...
Total	803	474	413	386	376	1110	10141	16823	22088	5010	1800	...
Mean.	25.9	15.8	13.3	12.5	13.4	35.8	338	543	736	162	58.1	...
Max..	46	19	17	14	17	93	821	1220	1020	451	128	...
Min..	20	13	10	11	11	16	39	151	458	67	42	...
Acre-ft.	1590	940	819	766	746	2200	20110	33370	43810	9940	3570	...

Unless otherwise noted, all discharges are in cubic feet per second.

Balance record to be printed next report.

Discharge of San Juan River at Pagosa Springs, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	150	205	104	68	60	59	199	964	1640	780	177	122
2....	141	168	88	60	60	60	290	1300	1710	670	160	100
3....	132	123	82	65	61	67	293	1580	1680	600	156	102
4....	132	126	92	63	59	70	254	1800	1600	520	142	98
5....	126	148	93	65	60	67	276	1910	1520	450	139	87
6....	137	154	56	63	59	73	305	1720	1300	410	160	85
7....	130	148	62	62	55	73	279	1820	1260	380	162	108
8....	130	143	71	67	47	82	362	1860	1370	370	132	91
9....	119	135	73	67	61	93	465	2180	1430	355	108	85
10....	112	139	63	59	56	98	643	2160	1360	334	112	77
11....	106	139	65	62	60	126	1050	2280	1460	596	102	71
12....	101	141	68	65	61	148	1210	2310	1530	402	94	66
13....	96	141	67	68	61	134	1390	2580	1610	346	91	63
14....	93	148	73	68	60	130	1550	2830	1560	337	89	62
15....	90	162	78	66	57	123	1940	2930	1340	309	91	56
16....	88	168	84	61	57	114	2120	2880	1400	291	94	56
17....	86	164	82	67	57	125	1850	2950	1500	281	106	54
18....	88	156	70	63	55	134	1550	2850	1520	265	100	51
19....	86	146	68	66	55	109	1580	2590	1580	242	120	47
20....	156	139	74	63	57	101	1590	2470	1580	215	91	46
21....	132	137	78	66	50	116	1830	2370	1460	203	85	43
22....	126	128	68	68	51	144	1940	2290	1340	188	82	44
23....	126	121	70	71	55	160	1590	2290	1220	175	82	43
24....	119	110	74	71	56	130	1260	2100	1170	177	72	48
25....	125	112	75	70	57	125	1290	1880	1100	173	69	44
26....	121	109	75	67	61	119	1580	1650	1050	193	74	41
27....	116	104	68	66	62	123	1710	1590	1050	206	93	40
28....	109	102	81	66	61	125	1410	1660	860	197	82	40
29....	109	106	78	65	....	117	1080	1730	800	239	74	46
30....	186	96	71	68	....	112	904	1760	760	199	79	179
31....	194	....	68	63	....	135	....	1720	....	177	186	....
Total	3762	4118	2319	2029	1611	3392	33790	65004	40760	10282	3404	2100
Mean..	121	137	74.8	65.5	57.5	109	1126	2097	1359	332	110	70.0
Max....	194	205	104	71	62	160	2120	2950	1710	780	186	179
Min....	86	96	56	59	47	59	199	964	760	173	69	40
Acre-ft.	7460	8170	4600	4020	3200	6730	67020	128900	80850	20390	6750	4170

Total run-off for water year 1936-37=342,300 acre-feet.

Discharge of San Juan River at Pagosa Springs, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	141	58	33	50	54	77	156	1590	2910	1460	178	110
2....	100	57	35	51	54	87	137	1210	2800	1250	163	178
3....	89	56	57	51	53	128	175	1040	2750	1110	156	167
4....	82	56	46	50	54	164	249	840	2990	970	163	196
5....	74	51	40	48	51	128	306	696	2800	864	165	202
6....	68	50	46	42	43	94	306	648	2710	752	149	196
7....	60	69	38	43	51	85	252	559	2440	672	165	191
8....	57	68	34	43	53	87	227	504	2240	586	138	230
9....	57	66	32	45	51	83	270	490	2000	533	136	193
10....	56	68	36	47	53	89	390	458	1910	494	124	174
11....	54	66	43	48	54	98	494	538	1840	454	134	173
12....	54	60	51	48	66	114	642	724	1970	440	235	1100
13....	56	53	53	49	74	122	625	840	2410	411	276	856
14....	54	53	56	50	63	116	533	1350	2250	428	324	602
15....	89	58	48	52	60	118	432	1800	2100	419	227	458
16....	130	48	47	56	57	116	428	1840	2000	374	180	402
17....	96	50	47	58	43	130	538	1780	1970	335	158	402
18....	91	56	36	57	50	132	840	1580	1940	316	147	306
19....	74	44	22	55	51	149	1140	1460	1710	320	130	267
20....	64	51	40	55	62	188	1150	1230	1680	309	118	230
21....	68	54	39	50	57	205	1370	1280	1840	276	112	212
22....	69	50	35	58	51	179	1460	1350	2120	255	103	193
23....	72	46	44	58	51	198	1730	1250	2120	244	100	178
24....	69	51	43	53	53	276	1850	1430	1720	212	101	171
25....	64	46	43	50	51	351	1820	1540	1570	202	103	165
26....	63	46	47	53	48	374	1590	1800	1520	191	105	152
27....	63	38	53	57	62	291	1380	2070	1480	198	93	141
28....	63	30	43	58	64	250	1500	2530	1390	320	93	134
29....	62	32	46	58	....	200	1720	3350	2100	235	100	124
30....	58	33	47	58	....	170	1750	3070	1800	198	114	114
31....	60	....	49	54	....	168	....	2900	....	187	103	....
Total	2257	1564	1329	1605	1534	4967	25460	43747	63080	15015	4593	8817
Mean..	72.8	52.1	42.9	51.8	54.8	160	849	1411	2103	484	148	294
Max....	141	69	57	58	74	374	1850	3350	2990	1460	324	1100
Min....	54	30	22	42	43	77	137	458	1390	187	93	110
Acre-ft.	4480	3100	2640	3180	3040	9850	50500	86770	125100	29780	9110	17490

Total run-off for water year 1937-38=345,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of San Juan River at Rosa, New Mexico, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	476	430	210	180	270	1250	5350	6000	4480	2050	900	483
2....	434	430	210	180	270	1250	5350	6000	4580	2300	700	340
3....	408	430	210	180	270	1250	5350	6000	4480	1990	600	290
4....	396	430	210	180	270	1250	5350	6000	4200	1700	600	310
5....	378	430	210	180	270	1250	5350	6000	3760	1590	700	300
6....	420	430	210	180	270	1250	5350	6000	3250	1500	511	280
7....	462	430	210	180	270	1250	5350	6000	3010	1300	584	322
8....	408	430	210	180	270	1250	5350	6000	3250	1200	500	310
9....	396	430	210	180	270	1250	5350	6000	3420	1050	430	300
10....	372	430	210	180	270	1250	5350	6000	3170	864	395	280
11....	354	430	210	180	270	1250	5350	6000	3420	1210	360	250
12....	336	430	210	180	270	1250	5360	6000	3760	1540	327	220
13....	330	430	210	180	270	1250	5360	6290	3670	1310	304	192
14....	330	430	210	180	270	1250	5350	7240	3580	1060	292	188
15....	330	430	210	180	270	1250	5350	7480	3250	864	284	179
16....	330	430	210	180	270	1250	5350	7240	3250	695	314	173
17....	330	430	210	180	270	1250	5350	7480	3500	584	447	173
18....	330	430	210	180	270	1250	5350	7480	3670	517	345	170
19....	330	430	210	180	270	1250	5350	6520	3580	456	370	161
20....	330	430	210	180	270	1250	5350	6290	3420	400	314	155
21....	330	430	210	180	270	1250	5350	6290	3420	370	280	155
22....	330	430	210	180	270	1250	5350	6180	3420	340	250	152
23....	330	430	210	180	270	1250	5350	6180	2940	320	230	152
24....	330	430	210	180	270	1250	5350	5840	3010	300	220	155
25....	330	430	210	180	270	1250	5350	4980	2710	280	210	155
26....	330	430	210	180	270	1250	5350	4200	3090	400	200	149
27....	330	430	210	180	270	1250	5350	3670	3010	666	210	146
28....	330	430	210	180	270	1250	5350	3840	2500	853	268	143
29....	330	430	210	180	....	1250	5350	4390	2170	1380	280	164
30....	330	430	210	180	....	1250	5350	5400	2240	1420	250	768
31....	330	....	210	180	....	1250	5080	5080	....	900	604	....
Total	11110	12900	6510	5580	7560	38750	160500	184070	101210	31409	12279	7215
Mean.	358	430	210	180	270	1250	5350	5938	3374	1013	396	240
Max.	....	....	....	....	....	....	....	7480	4580	2300	900	768
Min.	....	....	....	....	....	....	....	....	2170	280	200	143
Acre-ft.	22040	25590	12910	11070	15000	76860	318300	365100	200700	62300	24360	14310

Total run-off for water year 1936-37=1,149,000 acre-feet.

Discharge of San Juan River at Rosa, New Mexico, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	738	235	175	255	210	1310	870	6680	7180	3680	560	565
2....	384	225	195	280	200	1140	910	4420	6320	2960	502	925
3....	323	215	225	285	200	2690	1140	3770	6440	2580	466	1040
4....	291	206	185	260	215	2300	1810	3200	6800	2380	470	1220
5....	275	202	161	215	205	1000	2180	2660	6680	2070	470	1540
6....	252	199	158	185	195	650	2180	2300	6200	1790	444	1260
7....	238	220	158	165	196	500	1760	2240	5740	1610	466	1110
8....	220	295	158	152	220	520	1500	1980	5280	1440	466	1220
9....	213	244	167	152	224	500	1450	2040	4520	1320	410	1130
10....	206	227	158	160	202	570	2040	1870	4420	1210	402	809
11....	202	227	158	172	238	780	2580	1920	3860	1100	386	2100
12....	202	224	161	188	420	1070	3600	2300	4320	1060	555	3060
13....	234	213	188	199	542	1400	3600	2660	5620	1060	693	2620
14....	213	188	179	205	344	1220	3600	3860	5500	1030	780	1660
15....	259	192	179	212	307	652	2380	5960	4840	1210	655	1270
16....	624	188	170	220	267	840	2660	6440	4620	1030	502	1130
17....	425	176	164	248	220	1110	3200	5850	4420	900	434	1070
18....	327	185	152	241	182	968	4220	4940	4620	846	394	882
19....	311	188	140	196	182	1000	5500	4520	3860	828	378	801
20....	271	173	126	185	202	1360	5500	3770	3860	858	340	711
21....	263	188	112	179	192	1650	6440	3680	4040	888	318	647
22....	259	188	125	180	176	1110	6080	3860	5160	768	298	600
23....	255	179	140	170	164	1070	6680	3520	5160	768	284	568
24....	251	173	160	145	176	1600	6920	3940	4040	665	287	530
25....	247	179	190	180	167	2380	6920	4320	3520	610	284	512
26....	243	173	195	170	161	2660	6560	5280	3360	552	280	507
27....	239	161	175	180	176	2040	4620	5850	3360	520	274	462
28....	234	151	155	187	551	1810	4940	7680	3120	828	277	452
29....	230	139	140	196	....	1540	6080	8690	4730	774	312	431
30....	235	148	165	170	....	1270	6440	8180	5280	610	390	410
31....	240	....	205	185	....	963	....	7680	....	542	414	....
Total	8904	5901	5119	6117	6734	39673	114360	136060	146870	38487	13191	31242
Mean.	287	197	165	197	240	1280	3812	4389	4896	1242	426	1041
Max.	738	295	225	285	551	2690	6920	8690	7180	3680	780	3060
Min.	202	139	112	145	161	500	870	1870	3120	520	274	410
Acre-ft.	17660	11760	10150	12130	13360	78690	226800	269900	291300	76340	26160	61970

Total run-off for water year 1937-38=1,096,000 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of West Fork of San Juan River Above Borns Lake Near Pagosa Springs,
Colorado, for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....							18	125	379	184	45	31
2....							23	212	387	148	45	25
3....							22	253	358	129	43	32
4....							19	297	319	110	40	29
5....							19	305	287	97	38	26
6....							20	253	260	88	68	31
7....							20	270	280	95	53	32
8....							22	342	297	89	48	31
9....							28	404	301	78	42	25
10....							32	436	312	83	38	22
11....							44	436	379	138	38	21
12....							56	494	409	107	37	21
13....							100	544	400	104	34	19
14....							140	576	366	94	34	18
15....							170	608	358	79	33	18
16....							210	654	375	72	35	18
17....							160	701	396	68	37	18
18....							110	635	387	64	42	17
19....							110	580	375	60	36	18
20....							100	576	358	56	32	19
21....							150	571	350	54	31	19
22....							180	566	338	52	30	20
23....							120	548	335	53	28	20
24....							100	481	308	48	25	19
25....							120	387	283	53	29	17
26....							209	319	290	56	34	17
27....							192	327	247	56	32	16
28....							138	362	200	58	29	15
29....							97	418	184	60	26	32
30....							90	436	187	51	37	55
31....								418		47	51	...
Total							2819	13534	9705	2531	1170	701
Mean.							94.0	437	324	81.6	37.7	23.4
Max..							210	701	409	184	68	55
Min..							18	125	184	47	25	15
Acre-ft.							5590	26840	19250	5020	2320	1390

Total run-off for period=60,410 acre-feet.

**Discharge of West Fork of San Juan River Above Borns Lake Near Pagosa Springs,
Colorado, for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	32	19					*19	235	806	405	52	38
2....	37	17					19	152	828	335	49	51
3....	34	16					17	110	867	279	49	42
4....	32	18					19	86	856	239	50	55
5....	29	16					20	81	752	205	48	46
6....	27	15					20	71	730	178	47	45
7....	25	16					18	63	630	158	47	43
8....	25	17					17	59	590	149	43	55
9....	23	17					22	58	520	137	42	46
10....	22	17					34	55	520	128	36	55
11....	20	18					44	66	540	121	67	311
12....	21	17					52	83	590	113	59	350
13....	22	15					52	118	750	112	79	223
14....	23	16					47	217	670	119	74	158
15....	37	16					36	280	590	105	59	142
16....	31	14					31	294	550	95	61	121
17....	25	14					38	263	540	83	55	100
18....	28	15					71	200	525	83	51	94
19....	21	16					96	184	500	80	46	76
20....	22	14					95	163	475	82	41	65
21....	25	13					118	172	530	79	39	62
22....	25	14					165	184	608	77	38	58
23....	23	12					200	212	598	72	38	54
24....	23	12					232	257	475	61	40	49
25....	22	12					247	294	430	56	41	46
26....	20	13					200	396	395	52	39	43
27....	20	9			*9.8		187	530	365	75	36	40
28....	21	13					253	912	345	91	34	39
29....	22	10					297	889	592	69	36	38
30....	20	9					301	884	465	59	35	38
31....	20							862		54	33	
Total	777	440	248	279	274	341	2967	8430	17632	3951	1464	2583
Mean.	25.1	14.7	8.0	9.0	9.8	11.0	98.9	272	588	127	47.2	86.1
Max..	37	19					301	912	867	405	79	350
Min..	20	9					17	55	345	52	33	38
Acre-ft.	1540	873	492	553	542	676	5880	16720	34970	7840	2900	5120

Total run-off for water year 1937-38=78,110 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of West Fork of San Juan River Near Pagosa Springs, Colorado,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	61	63	43	30	26	26	37	342	791	402	86	59
2....	57	52	37	30	26	25	46	466	822	342	75	50
3....	52	48	37	36	26	25	45	585	802	288	75	52
4....	52	59	40	34	24	28	42	684	741	250	72	46
5....	50	59	35	35	25	30	42	731	666	224	67	46
6....	55	59	28	36	25	27	45	625	567	203	136	46
7....	52	59	32	30	23	30	42	629	572	196	98	54
8....	55	55	34	32	20	31	46	736	648	183	77	46
9....	50	55	34	34	28	34	62	870	666	166	70	46
10....	46	55	27	30	26	42	80	892	657	159	67	42
11....	46	57	28	29	28	50	139	892	731	239	62	40
12....	45	57	29	30	32	70	228	980	770	217	59	38
13....	43	59	28	33	32	55	299	1090	741	200	57	34
14....	43	61	30	33	30	55	386	1240	703	176	57	32
15....	45	68	32	32	28	46	506	1370	657	162	57	31
16....	43	68	34	30	28	35	563	1370	684	139	59	31
17....	40	66	31	33	28	38	462	1390	750	129	57	29
18....	37	63	25	32	28	35	394	1320	765	123	54	29
19....	38	59	27	33	27	34	402	1160	717	113	59	27
20....	59	57	29	32	27	35	402	1150	703	107	46	26
21....	55	57	31	34	23	35	506	1130	707	98	50	24
22....	50	52	25	35	24	37	545	1130	675	92	57	24
23....	48	48	27	36	24	35	427	1110	638	92	52	26
24....	48	46	31	37	24	37	338	1000	576	83	48	26
25....	48	46	31	34	24	34	382	909	545	80	44	26
26....	50	45	31	29	24	35	523	776	594	86	52	26
27....	45	43	26	28	26	32	572	786	510	95	62	26
28....	43	42	38	28	28	32	431	859	427	89	48	24
29....	43	43	36	28	....	31	334	854	398	107	44	31
30....	76	40	30	30	....	34	295	875	386	89	50	95
31....	66	....	31	27	....	35	....	843	....	77	104	....
Total	1541	1641	977	990	734	1128	8621	28794	19609	5006	2001	1138
Mean.	49.7	54.7	31.5	31.9	26.2	36.4	287	929	654	161	64.5	37.9
Max.	76	68	43	37	32	70	572	1390	822	402	136	95
Min.	37	40	25	27	20	25	37	342	386	77	44	24
Acre-ft.	3060	3250	1940	1960	1460	2240	17100	57110	38890	9930	3970	2260

Total run-off for water year 1936-37=143,200 acre-feet.

**Discharge of West Fork of San Juan River Near Pagosa Springs, Colorado,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	62	32	19	18	19	26	40	689	1420	886	86	38
2....	50	31	20	19	19	24	38	470	1360	736	75	86
3....	46	31	19	19	19	38	46	386	1400	634	72	64
4....	44	29	17	19	20	32	57	292	1460	536	75	120
5....	38	26	16	19	19	22	70	235	1320	453	64	95
6....	36	26	17	15	16	19	70	133	1330	386	57	86
7....	34	36	16	15	18	17	62	166	1220	322	59	89
8....	34	32	14	15	19	19	57	159	1100	299	44	149
9....	32	32	15	16	18	17	64	152	974	273	48	77
10....	32	34	15	17	19	12	95	149	974	246	34	38
11....	31	34	16	18	20	12	120	173	998	232	44	....
12....	31	31	17	18	24	12	149	221	1060	224	176	....
13....	31	26	16	18	27	12	145	288	1400	228	232	....
14....	31	27	17	19	23	13	126	545	1200	242	295	....
15....	57	27	17	20	22	14	107	776	1090	217	186	....
16....	62	24	17	21	20	14	110	828	1020	200	120	....
17....	44	26	17	22	16	16	142	776	998	183	89	....
18....	42	27	13	21	18	17	224	625	986	183	75	....
19....	32	24	10	20	19	20	307	536	938	193	57	....
20....	32	24	15	20	22	24	358	462	903	203	48	....
21....	36	26	14	18	20	36	457	466	962	186	40	....
22....	36	24	13	21	19	29	541	488	1250	162	32	....
23....	38	19	16	21	24	26	652	510	1240	129	32	....
24....	36	22	16	19	20	44	722	620	1030	95	32	....
25....	38	20	15	18	20	67	750	689	980	80	32	....
26....	36	20	17	19	17	86	652	864	838	67	24	....
27....	38	19	19	20	19	72	532	1020	807	101	20	....
28....	36	20	16	21	26	64	625	1400	770	254	20	....
29....	34	19	17	21	....	50	755	1550	1450	173	27	....
30....	31	17	18	21	....	42	817	1460	1150	132	40	....
31....	31	....	19	19	....	42	....	1480	....	107	26	....
Total	1191	785	503	587	562	938	8890	18658	33628	8362	2261	....
Mean.	38.4	26.2	16.2	18.9	20.1	30.3	296	602	1121	270	72.9	....
Max.	62	36	20	22	27	86	817	1550	1460	886	295	....
Min.	31	17	10	15	16	12	38	149	770	67	20	....
Acre-ft.	2360	1560	998	1160	1110	1860	17630	37010	66700	16590	4480	....

Unless otherwise noted, all discharges are in cubic feet per second.

Balance record to be printed next report.

Discharge of Turkey Creek Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	137	166	69	14	3.9
2....	216	156	59	11	2.4
3....	237	146	59	9.4	2.6
4....	245	137	50	8.7	1.9
5....	254	134	45	9.8	1.2
6....	233	122	35	14	1.2
7....	254	119	33	12	1.5
8....	271	131	28	11	1.2
9....	311	131	22	9.0	1.2
10....	362	122	22	7.7	.8
11....	381	114	34	7.1	.8
12....	381	125	33	6.1	.7
13....	306	137	32	5.8	.6
14....	266	122	29	5.8	.6
15....	258	111	29	6.1	.6
16....	254	111	22	5.6	.6
17....	254	122	20	6.1	.6
18....	249	128	15	7.1	.4
19....	249	122	13	6.4	.5
20....	245	125	9.4	3.9	.6
21....	241	122	9.4	3.9	.6
22....	271	109	9.8	3.6	.4
23....	249	106	9.4	3.2	.6
24....	228	93	9.8	2.6	.6
25....	179	80	9.0	1.4	.6
26....	159	122	9.4	1.2	.6
27....	143	128	14	2.6	.6
28....	159	86	12	2.5	.4
29....	182	78	20	1.6	1.0
30....	193	75	14	3.6	14
31....	172	....	13	11	....
Total	7539	3580	788.2	203.8	43.3
Mean..	243	119	25.4	6.57	1.44
Max...	381	166	69	14	14
Min...	137	75	9.0	1.2	0.4
Acre-ft.	14950	7100	1560	404	86

Total run-off for period = 24,100 acre-feet.

Discharge of Turkey Creek Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.1	1.7	.....	.....	.....	.....	16	212	324	106	13	9.0
2....	3.0	1.7	.....	.....	.....	*52	15	131	297	89	11	14
3....	2.4	1.9	.....	.....	.....	.....	17	100	302	75	12	13
4....	1.8	2.4	.....	.....	.....	.....	18	82	311	62	16	22
5....	1.6	2.4	.....	.....	.....	.....	21	75	288	53	16	19
6....	1.2	2.2	.....	.....	.....	.....	19	60	271	42	17	16
7....	1.0	3.0	.....	.....	.....	.....	16	56	224	39	13	14
8....	1.1	2.5	.....	.....	.....	.....	16	54	209	35	13	27
9....	2.6	3.0	.....	.....	.....	.....	20	56	182	35	11	22
10....	3.4	3.1	.....	.....	.....	.....	26	59	169	34	11	27
11....	3.6	3.1	.....	.....	.....	.....	44	75	156	30	20	90
12....	1.7	2.8	.....	.....	.....	.....	57	96	179	35	16	98
13....	1.8	2.5	.....	.....	.....	.....	59	125	241	38	27	60
14....	1.5	2.4	.....	.....	.....	.....	49	205	220	38	22	48
15....	7.1	1.9	*5.1	.....	.....	.....	37	254	216	34	18	42
16....	8.0	2.0	.....	.....	.....	.....	34	228	237	30	14	39
17....	5.6	1.9	.....	.....	.....	.....	45	197	241	25	12	34
18....	4.6	1.9	.....	.....	.....	.....	93	156	166	29	11	29
19....	3.4	2.4	.....	.....	.....	.....	111	143	143	22	10	24
20....	3.2	2.8	.....	.....	*6.1	.....	179	131	134	20	9.8	20
21....	3.6	2.5	.....	.....	.....	.....	212	137	172	20	8.7	18
22....	3.1	2.2	.....	.....	.....	.....	224	137	228	18	8.0	18
23....	3.0	2.5	.....	.....	.....	.....	262	143	197	17	7.7	17
24....	3.0	2.8	.....	.....	.....	.....	280	162	140	16	8.4	16
25....	2.8	2.5	.....	.....	.....	.....	293	193	131	14	9.0	14
26....	2.5	2.8	.....	.....	.....	.....	245	245	122	12	7.7	14
27....	2.4	2.0	.....	.....	.....	.....	205	284	116	15	8.0	11
28....	2.2	3.0	.....	.....	.....	.....	224	362	116	17	8.0	9.4
29....	2.0	2.8	.....	.....	.....	*19	254	448	180	16	8.4	8.7
30....	1.9	2.7	.....	*3.0	.....	.....	254	362	125	14	7.7	8.4
31....	1.8	.....	.....	.....	.....	.....	.....	357	....	14	5.8	....
Total	93.0	73.4	130.2	108.5	126.0	279	3345	5325	6037	1044	380.2	801.5
Mean..	3.00	2.45	4.2	3.5	4.5	9.0	112	172	201	33.7	12.3	26.7
Max...	8.0	3.1	.....	.....	.....	.....	293	448	324	106	27	98
Min...	1.0	1.7	.....	.....	.....	.....	15	54	116	12	5.8	8.4
Acre-ft.	184	146	258	215	250	553	6630	10560	11970	2070	754	1590

Total run-off for water year 1937-38 = 35,180 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Blanco Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	52	69	27	19	16	21	31	253	588	224	54	25
2....	45	57	25	19	17	24	44	377	576	206	52	22
3....	43	56	27	18	17	27	41	437	522	193	46	22
4....	39	57	23	18	17	30	36	518	472	168	40	21
5....	39	66	22	18	18	32	37	460	346	144	41	19
6....	52	64	22	18	18	34	39	542	275	122	40	21
7....	51	60	22	20	18	37	37	548	272	112	38	25
8....	45	51	21	17	17	50	47	624	318	100	34	19
9....	40	50	19	16	16	45	74	677	310	95	31	16
10....	36	52	18	17	17	52	121	644	314	111	28	14
11....	33	52	23	18	17	38	192	650	365	188	25	12
12....	32	52	23	20	17	32	239	663	411	158	24	12
13....	30	52	23	21	17	28	306	772	395	139	23	10
14....	30	60	23	20	18	26	343	844	355	107	25	9.8
15....	28	69	23	19	18	25	465	963	328	89	25	9.8
16....	27	64	22	22	17	24	460	963	375	80	34	10
17....	26	60	18	22	17	25	343	1150	416	80	34	12
18....	25	53	18	21	16	23	334	944	416	75	34	9.3
19....	30	47	19	20	16	23	315	944	422	69	27	9.3
20....	55	46	20	19	15	21	324	856	380	61	24	9.3
21....	57	45	20	18	14	25	348	744	411	59	24	9.3
22....	53	42	19	13	14	27	343	723	400	54	23	12
23....	52	41	20	15	14	28	253	656	380	50	22	13
24....	57	37	20	18	15	30	195	534	323	50	21	11
25....	52	37	20	20	15	24	242	450	370	51	21	11
26....	51	36	19	22	15	23	377	332	323	64	26	11
27....	51	34	19	22	15	22	372	305	286	70	30	9.3
28....	47	34	20	23	17	22	261	350	250	70	28	8.2
29....	51	29	19	23	....	26	192	522	235	144	26	29
30....	88	30	19	23	....	26	186	695	247	71	44	131
31....	78	....	19	19	....	25	....	612	....	58	37	....
Total	1395	1502	661	607	458	895	6597	19752	11081	3262	981	552.3
Mean.	45.0	50.1	21.3	19.6	16.4	28.9	220	637	370	105	31.6	18.4
Max..	88	69	27	23	18	52	465	1150	588	224	54	131
Min..	25	29	18	13	14	21	31	253	235	50	21	8.2
Acre-ft.	2770	2980	1310	1200	908	1780	13080	39180	21980	6470	1950	1100

Total run-off for water year 1936-37=94,710 acre-feet.

Discharge of Rio Blanco Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	39	21	12	10	10	8.2	43	350	662	290	66	44
2....	26	18	12	11	10	9.3	40	216	636	268	57	71
3....	22	18	14	11	10	17	43	190	546	247	52	58
4....	23	17	14	11	10	21	60	144	630	216	53	70
5....	21	17	13	11	10	19	85	118	576	190	51	69
6....	18	16	12	9	9	22	78	109	570	168	59	58
7....	16	24	13	9	10	21	65	96	534	148	54	61
8....	16	24	13	9	10	18	51	89	472	137	47	80
9....	16	25	12	9	10	18	51	86	460	112	53	50
10....	15	27	13	10	10	17	63	86	455	122	40	64
11....	15	24	14	10	11	16	94	112	482	92	40	230
12....	16	21	14	10	12	18	135	146	522	107	45	219
13....	16	19	13	10	13	18	131	185	558	100	56	107
14....	15	19	13	10	12	18	103	336	488	89	86	74
15....	57	18	13	10	10	18	80	477	482	107	36	63
16....	84	16	12	11	10	18	79	534	450	102	26	61
17....	49	16	12	11	9	22	103	472	466	89	24	51
18....	49	18	10	11	9	21	198	395	428	78	25	45
19....	36	16	9	*11	10	26	268	305	400	83	21	45
20....	34	18	10	10	11	42	256	290	411	100	18	39
21....	37	17	11	10	10	51	355	355	552	83	15	34
22....	38	15	12	11	9.3	39	433	350	606	75	15	31
23....	38	15	10	11	8.2	44	482	355	504	70	16	29
24....	32	15	10	10	6.6	55	510	433	395	67	17	28
25....	29	14	10	10	7.6	79	499	460	411	62	17	28
26....	27	14	11	11	10	95	422	422	411	59	18	25
27....	25	13	12	12	6.6	73	328	428	390	64	16	22
28....	23	13	10	12	6.6	63	380	643	346	67	16	23
29....	22	14	10	12	....	53	444	688	758	59	21	25
30....	22	13	10	11	....	50	482	510	428	54	24	22
31....	21	....	10	10	....	47	....	540	....	75	25	....
Total	897	535	364	324	270.9	1036.5	6361	9920	15029	3580	1109	1826
Mean.	28.9	17.8	11.7	10.5	9.68	33.4	212	320	501	115	35.8	60.9
Max..	84	27	14	12	13	95	510	688	758	290	86	230
Min..	15	13	9	9	6.6	8.2	40	86	346	54	15	22
Acre-ft.	1780	1060	722	643	537	2060	12620	19680	29810	7100	2200	3620

Total run-off for water year 1937-38=81,830 acre-feet.

* Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rito Blanco Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.6	10	17	2.3	1.5	1.9	12	95	124	17	6.2	1.5
2....	4.7	9.1	7.6	2.2	1.6	2.0	19	130	112	15	5.1	1.0
3....	2.4	8.4	7.0	2.2	1.5	1.9	18	169	103	13	5.6	.8
4....	2.4	9.1	11	2.3	1.8	2.1	14	182	92	11	2.8	.8
5....	2.1	10	7.0	2.4	1.9	2.3	17	182	82	9.8	2.2	.7
6....	3.1	10	4.9	2.5	2.0	2.1	18	179	64	7.8	2.2	.7
7....	3.6	9.6	4.2	2.5	1.8	2.4	16	179	57	6.7	2.2	2.0
8....	3.1	9.6	4.8	2.4	1.5	3.9	23	193	49	6.2	2.0	1.1
9....	2.9	10	3.8	2.2	1.5	6.2	35	189	51	5.4	1.5	.8
10....	2.3	10	2.8	1.9	1.6	21	49	186	49	5.4	1.3	.4
11....	1.9	10	2.9	2.0	1.6	51	85	196	57	10	1.1	.4
12....	1.8	10	3.0	2.1	1.6	39	129	200	70	9.4	.9	.3
13....	1.6	10	2.9	2.4	1.6	17	159	210	57	6.5	.6	.3
14....	1.2	10	2.9	1.8	1.6	15	169	210	51	5.4	.4	.3
15....	1.1	11	3.2	2.0	2.4	18	203	200	44	3.9	.6	.4
16....	.9	11	3.4	2.3	2.1	11	196	179	44	2.8	.9	.3
17....	.8	11	3.2	2.5	1.8	9.1	169	186	47	2.6	1.5	.3
18....	.7	10	3.0	2.4	1.7	8.7	162	186	47	2.6	2.2	.3
19....	.6	9.6	3.0	2.1	1.7	21	146	159	51	5.4	3.2	.3
20....	2.6	9.1	3.0	1.8	1.6	16	179	146	49	4.8	1.4	.3
21....	2.9	9.1	3.2	1.6	1.5	17	189	133	52	4.6	1.3	.2
22....	3.9	8.7	3.4	1.4	1.6	15	179	133	51	4.3	1.1	.3
23....	4.2	8.7	3.5	1.3	1.6	11	152	130	46	4.1	1.0	.4
24....	3.6	9.1	3.5	1.1	1.6	22	115	127	37	4.1	.9	.3
25....	4.4	9.1	3.6	1.0	1.5	9.6	121	109	35	3.9	.8	.3
26....	4.2	9.6	3.4	1.1	1.5	9.6	156	88	33	5.1	.9	.3
27....	3.9	12	3.3	1.1	1.6	7.0	172	75	29	5.9	2.2	.3
28....	4.2	14	3.3	1.2	2.0	7.3	143	80	24	10	1.5	.2
29....	4.7	15	3.3	1.4	....	6.6	103	109	19	9.8	1.0	.4
30....	10	16	2.7	1.4	....	9.6	88	130	21	9.8	1.6	12
31....	11	....	2.4	1.5	....	11	....	130	....	7.0	5.1	....
Total	102.4	308.8	136.2	58.4	47.3	377.3	3236	4800	1647	219.3	61.3	27.7
Mean.	3.30	10.3	4.39	1.88	1.69	12.2	108	155	54.9	7.07	1.98	.92
Max..	11	16	17	2.5	2.4	51	203	210	124	17	6.2	12
Min..	.6	8.4	2.4	1.0	1.5	1.9	12	75	19	2.6	.4	.2
Acre-ft.	203	612	270	116	94	748	6420	9520	3270	435	122	55

Total run-off for water year 1936-37=21,860 acre-feet.

Discharge of Rito Blanco Near Pagosa Springs, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	4.8	0.9	0.8	1.4	1.9	1.7	15	144	141	40	1.5	4.5
2....	2.4	.8	.9	1.6	2.1	1.9	12	101	125	36	1.2	1.4
3....	.9	.8	1.0	1.8	1.9	2.1	17	79	122	32	1.2	1.0
4....	.6	.9	1.9	1.7	1.7	2.5	22	69	113	29	1.8	7.4
5....	.6	.9	2.1	1.3	1.2	2.4	23	58	113	27	2.8	9.0
6....	.5	.8	1.0	1.2	.8	2.0	22	54	110	24	1.5	10
7....	.4	1.7	1.0	1.1	1.1	2.2	18	50	110	22	1.2	10
8....	.4	1.8	.9	1.1	1.6	2.7	16	44	101	19	.9	14
9....	.4	1.0	1.1	1.0	2.0	3.6	18	43	88	18	.8	9.0
10....	.4	1.9	1.1	1.0	2.2	3.4	23	38	79	18	1.7	7.0
11....	.4	2.2	1.5	1.1	2.6	5.1	29	44	74	15	2.2	18
12....	.4	1.5	1.7	1.2	3.8	4.8	42	53	74	16	3.1	19
13....	.4	1.4	2.2	1.2	3.7	5.4	47	61	84	16	7.0	15
14....	.4	1.1	2.2	1.4	2.5	6.2	45	107	74	15	4.0	13
15....	1.5	1.5	1.2	1.8	2.2	7.8	34	154	68	16	2.8	11
16....	5.4	.8	1.2	2.3	1.7	7.0	35	150	64	13	1.9	13
17....	2.5	1.0	1.7	2.4	1.1	9.4	44	141	58	11	1.8	11
18....	1.9	1.8	1.8	2.4	.9	8.2	71	122	54	11	2.2	7.4
19....	1.9	.8	1.7	*2.2	1.2	10	101	122	45	9.8	1.8	6.6
20....	1.7	1.0	1.4	1.9	1.8	12	96	113	43	14	1.4	5.8
21....	2.1	1.1	1.3	1.7	1.7	12	147	104	47	14	1.0	6.2
22....	2.2	.9	1.3	1.9	*1.3	12	167	101	56	11	1.0	5.8
23....	2.4	.8	1.3	1.7	1.2	19	196	93	61	9.0	1.0	4.8
24....	1.8	.9	1.5	1.3	1.7	19	200	93	50	8.2	1.4	5.1
25....	1.4	1.0	2.1	1.2	2.1	24	185	104	41	8.2	1.9	3.7
26....	1.1	.9	1.5	1.5	1.8	27	157	119	37	4.0	1.7	3.7
27....	1.1	.8	1.8	1.6	1.4	25	122	134	35	4.5	1.9	2.8
28....	1.0	.8	2.2	2.1	1.5	22	125	164	32	6.6	1.2	2.5
29....	1.1	.8	2.4	1.8	....	18	154	185	56	6.2	1.7	2.8
30....	1.0	.8	2.0	1.7	....	15	154	157	48	2.8	3.4	2.5
31....	.9	....	1.4	1.6	....	14	....	144	....	2.1	3.4	....
Total	43.6	32.4	47.1	49.3	48.7	306.8	2337	3145	2203	478.4	61.4	254.6
Mean.	1.41	1.08	1.52	1.59	1.74	9.90	77.9	101	73.4	15.4	1.98	8.49
Max..	5.4	2.2	2.4	2.4	2.8	27	200	185	141	40	7.0	19
Min..	.4	.4	.8	1.0	.8	1.7	12	38	32	2.1	.7	2.5
Acre-ft.	86	64	93	98	97	609	4640	6240	4370	949	122	505

Total run-off for water year 1937-38=17,870 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Navajo River at Banded Peak Ranch Near Chromo, Colorado,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	31	307	464	276	79	40
2....	38	300	484	286	72	38
3....	36	297	472	246	64	42
4....	34	300	444	218	62	41
5....	37	314	420	212	58	37
6....	42	347	389	182	61	44
7....	40	378	382	164	61	48
8....	56	382	401	150	56	43
9....	78	347	404	136	55	42
10....	140	359	404	169	51	38
11....	220	401	460	229	50	37
12....	270	397	436	198	50	35
13....	311	436	424	172	48	34
14....	297	329	397	155	45	33
15....	297	307	374	141	43	33
16....	280	382	408	124	55	33
17....	286	520	428	108	50	33
18....	259	580	428	102	49	33
19....	259	548	408	92	46	32
20....	246	544	393	88	43	32
21....	252	536	397	85	44	31
22....	263	536	393	82	42	32
23....	258	524	374	78	41	33
24....	242	500	332	75	40	32
25....	275	448	401	84	40	32
26....	295	382	332	94	41	32
27....	300	412	293	82	42	31
28....	280	401	269	84	41	31
29....	250	432	246	131	41	46
30....	297	460	252	82	48	85
31....	468	....	84	47	....
Total	5969	12874	11709	4409	1565	1133
Mean	199	415	390	142	505	37.8
Max..	311	580	484	286	79	85
Min..	31	297	246	75	40	31
Acre-ft.	11840	25540	23220	8750	3100	2250

Total run-off for period=74,700 acre-feet.

**Discharge of Navajo River at Banded Peak Ranch Near Chromo, Colorado,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	42	34	22	31	29	34	28	426	728	361	85	66
2....	40	31	24	30	28	34	29	325	711	312	74	78
3....	35	29	26	29	28	35	34	296	665	274	78	74
4....	36	29	26	28	27	32	53	242	660	239	76	80
5....	35	29	26	26	27	31	60	204	665	211	72	82
6....	34	29	26	25	27	31	58	185	706	191	70	78
7....	34	29	26	26	28	32	54	162	695	173	66	87
8....	34	36	27	26	29	34	53	149	620	167	68	99
9....	33	33	26	27	29	35	58	142	615	159	78	87
10....	32	32	30	28	30	35	70	142	615	147	62	96
11....	30	31	28	29	31	36	95	188	605	140	64	152
12....	35	32	27	29	32	37	112	228	610	138	68	191
13....	34	31	28	30	32	38	120	265	594	127	76	115
14....	34	30	27	30	31	39	110	416	539	140	82	115
15....	58	28	26	30	30	38	93	520	549	147	66	112
16....	57	27	26	30	28	39	90	519	519	130	61	99
17....	49	27	*27	29	28	41	114	485	529	119	56	88
18....	48	29	23	28	28	39	191	455	504	119	60	80
19....	42	31	20	28	30	40	257	431	465	115	53	74
20....	40	29	20	27	30	42	288	407	460	101	50	74
21....	40	29	21	28	30	48	374	436	514	101	49	76
22....	41	29	25	29	30	42	397	421	569	93	49	73
23....	40	30	27	30	30	44	440	412	470	88	50	70
24....	39	28	27	29	30	48	460	470	417	85	50	70
25....	38	28	27	28	31	58	490	510	398	84	50	66
26....	39	26	28	29	30	67	450	550	403	80	49	60
27....	39	24	29	30	30	61	384	610	398	82	48	58
28....	39	23	28	30	32	54	402	700	384	80	50	56
29....	38	24	29	30	....	36	440	744	509	74	50	54
30....	36	23	30	30	....	31	480	711	427	73	51	54
31....	35	....	31	30	....	28	....	711	....	76	51	....
Total	1206	886	813	889	825	1239	6284	12483	16543	4435	1912	2564
Mean	38.9	29.3	26.2	28.7	29.5	40.0	209	403	551	143	61.7	85.5
Max..	58	39	31	31	32	67	490	744	728	361	85	191
Min..	30	23	20	25	27	28	28	142	384	73	48	54
Acre-ft.	2390	1750	1610	1760	1640	2460	12460	24760	32810	8800	3790	5090

Total run-off for water year 1937-38=99,320 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Navajo River Near Chromo, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	86	90	58	42	33	41	47	262	574	285	91	50
2....	83	81	56	42	35	41	78	344	623	326	83	45
3....	81	66	52	46	34	41	70	448	602	257	76	43
4....	78	64	54	29	38	40	58	497	560	223	80	45
5....	76	76	55	32	39	40	64	546	483	215	70	39
6....	81	83	47	34	40	33	67	560	434	194	68	41
7....	78	83	48	33	36	47	62	560	427	173	66	55
8....	75	78	48	35	34	68	88	574	448	153	60	46
9....	72	76	48	32	36	46	144	602	462	144	58	45
10....	67	76	51	29	36	80	202	644	462	166	55	39
11....	64	76	50	30	36	43	296	772	490	251	54	39
12....	62	76	55	32	37	38	388	860	511	206	51	38
13....	62	76	50	35	36	32	448	959	490	180	50	38
14....	60	78	48	31	38	28	539	1060	476	156	46	37
15....	58	80	47	33	42	25	708	1040	448	138	47	37
16....	58	80	45	37	36	24	693	941	476	129	61	37
17....	56	80	43	36	38	24	553	986	511	121	62	36
18....	55	78	38	35	35	25	434	977	497	112	62	36
19....	56	75	41	34	37	21	394	896	497	100	56	36
20....	72	73	41	32	35	20	407	812	462	91	50	34
21....	72	70	42	24	34	24	511	820	483	90	48	32
22....	68	67	40	23	35	30	490	820	483	88	47	32
23....	70	64	40	24	36	36	407	796	448	86	45	34
24....	67	62	40	30	38	29	285	700	394	83	40	33
25....	68	61	46	36	37	29	296	581	434	91	41	32
26....	72	60	47	38	36	27	401	504	394	99	45	31
27....	68	60	40	41	35	27	448	476	332	95	48	30
28....	67	61	41	42	40	28	356	497	302	99	50	30
29....	66	61	40	43	....	28	236	581	279	138	47	43
30....	95	58	38	43	....	58	232	623	285	107	51	129
31....	97	....	40	36	....	68	....	602	....	93	61	....
Total	2190	2169	1429	1069	1022	1141	9402	21340	13767	4689	1769	1242
Mean.	70.6	72.3	46.1	34.5	36.5	36.8	313	688	459	151	57.1	41.4
Max..	97	90	58	46	42	80	708	1060	623	326	91	129
Min..	55	58	38	23	33	20	47	262	279	83	40	30
Acre-ft.	4340	4300	2830	2120	2030	2260	18650	42330	27310	9300	3510	2460

Total run-off for water year 1936-37=121,400 acre-feet.

Discharge of Navajo River Near Chromo, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	66	35	23	32	32	38	51	595	771	395	83	57
2....	52	33	25	32	31	37	51	434	763	357	66	86
3....	48	32	28	32	31	50	78	388	795	309	64	83
4....	47	32	27	31	31	45	97	326	763	276	69	88
5....	43	30	27	28	30	35	121	268	771	241	63	86
6....	42	30	28	27	29	33	107	246	732	214	71	83
7....	41	40	27	28	30	35	95	227	680	190	64	86
8....	40	38	31	29	31	38	90	211	605	175	61	118
9....	41	33	27	29	32	38	110	202	582	168	79	83
10....	41	34	35	30	32	38	162	198	575	155	66	85
11....	40	34	32	31	33	38	215	232	568	140	63	210
12....	46	34	29	31	34	43	262	285	605	140	69	256
13....	45	34	31	32	36	45	285	326	620	128	75	168
14....	41	34	30	33	36	43	236	546	530	142	92	123
15....	67	34	27	33	35	41	194	679	552	158	66	108
16....	75	31	28	33	32	45	211	718	560	137	58	101
17....	60	31	28	32	30	48	274	612	560	120	54	92
18....	58	34	23	31	30	46	414	560	575	118	58	81
19....	48	30	21	31	32	50	539	500	523	120	53	75
20....	45	33	21	*30	33	64	581	442	545	118	48	69
21....	46	34	24	31	*33	70	700	560	658	103	45	66
22....	45	32	27	32	33	55	672	523	680	94	39	63
23....	46	30	28	33	33	58	716	478	620	92	40	61
24....	45	31	28	31	34	93	665	552	500	86	41	60
25....	43	30	29	30	33	129	748	612	500	81	41	61
26....	43	28	29	31	32	144	665	680	478	77	40	57
27....	42	27	31	32	33	129	525	748	471	79	40	54
28....	42	24	29	33	37	110	567	844	415	77	39	54
29....	40	26	30	32	....	88	644	920	620	71	43	55
30....	36	24	31	32	....	72	693	860	493	71	42	58
31....	36	....	32	32	....	62	....	787	....	69	43	....
Total	1450	952	866	964	908	1860	10768	15559	18110	4701	1775	2727
Mean.	46.8	31.7	27.9	31.1	32.4	60.0	359	502	604	152	57.3	90.9
Max..	75	40	35	33	37	144	748	920	795	395	92	256
Min..	36	24	21	27	29	33	51	198	415	69	39	54
Acre-ft.	2880	1890	1720	1910	1800	3690	21360	30860	35920	9320	3520	5410

Total run-off for water year 1937-38=120,300 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Navajo River at Edith, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	94	111	65	47	58	55	174	518	638	262	103	48
2....	88	100	60	45	61	55	252	679	648	342	93	44
3....	87	77	55	44	60	56	252	748	610	264	86	44
4....	84	72	58	39	64	55	188	796	546	240	84	46
5....	80	88	58	40	65	53	199	908	495	218	80	44
6....	90	94	54	43	67	43	232	908	441	225	75	45
7....	88	94	52	42	64	104	220	929	424	184	70	62
8....	85	90	52	44	60	210	295	992	451	174	62	46
9....	81	85	52	42	62	218	444	1060	469	164	58	44
10....	76	87	52	39	62	280	600	1050	458	158	57	38
11....	72	87	52	40	62	285	929	1110	491	254	56	36
12....	71	90	52	41	64	230	1050	1120	495	223	55	34
13....	71	90	52	48	62	170	1170	1200	484	195	53	34
14....	69	91	51	46	64	120	1330	1190	473	170	47	34
15....	65	94	49	54	68	100	1580	1210	441	153	49	34
16....	64	96	47	56	58	98	1550	1100	433	142	54	33
17....	63	94	46	56	60	98	1260	1150	488	133	71	33
18....	63	92	42	55	58	106	1020	1090	491	125	62	33
19....	64	88	44	53	60	87	1060	999	462	117	60	32
20....	85	84	44	51	56	75	1060	894	455	108	52	31
21....	83	83	46	45	54	89	1180	868	448	98	46	30
22....	77	78	44	44	52	110	1210	894	434	94	47	31
23....	70	76	44	46	54	138	1040	844	410	94	48	33
24....	77	69	44	56	55	103	724	760	393	86	45	31
25....	78	66	47	62	53	102	718	638	455	93	44	31
26....	81	65	46	64	52	94	894	518	417	100	43	31
27....	78	63	44	69	52	93	964	507	329	106	44	30
28....	78	63	45	71	54	100	760	503	289	108	48	30
29....	75	63	44	72	....	103	550	600	270	156	48	42
30....	108	61	43	39	....	94	518	690	270	133	54	128
31....	120	....	46	64	....	118	....	634	....	104	61	....
Total	2475	2491	1530	1591	1661	3642	23423	27107	13608	5023	1855	1212
Mean.	79.8	83.0	49.4	51.3	59.3	117	781	874	454	162	598	40.4
Max..	120	111	65	73	68	285	1580	1210	648	342	103	128
Min..	63	61	42	39	52	43	174	503	270	86	43	30
Acre-ft.	4910	4940	3030	3160	3290	7220	46460	53770	26990	9960	3680	2400

Total run-off for water year 1936-37=169,800 acre-feet.

Discharge of Navajo River at Edith, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	76	43	25	36	35	77	71	874	886	449	88	55
2....	59	42	28	36	35	82	67	544	868	374	73	102
3....	54	41	35	36	35	100	108	521	862	334	72	102
4....	50	41	29	35	35	105	189	421	838	300	79	96
5....	47	40	28	31	34	90	223	364	880	264	72	97
6....	47	40	31	29	32	82	206	340	856	238	75	96
7....	45	49	28	30	33	70	167	311	820	210	72	86
8....	44	50	30	31	35	68	143	280	696	189	67	141
9....	44	43	28	32	35	67	178	280	672	174	82	99
10....	43	44	30	33	35	64	251	264	653	167	70	83
11....	43	44	32	33	37	66	343	294	631	150	67	230
12....	45	40	33	34	42	70	390	349	676	147	71	272
13....	51	37	33	35	46	86	393	387	715	143	83	223
14....	45	36	32	35	45	80	303	576	622	159	99	147
15....	61	36	31	36	43	76	292	778	622	210	73	126
16....	94	33	30	37	38	78	358	820	610	159	62	123
17....	74	34	29	36	32	91	374	700	605	138	58	115
18....	73	36	25	35	34	83	564	631	610	128	62	94
19....	64	32	23	34	37	96	662	564	556	128	56	88
20....	60	36	23	33	42	129	691	502	544	134	52	79
21....	60	34	29	32	37	134	1040	556	614	131	49	75
22....	59	33	31	34	36	96	880	552	662	113	47	71
23....	57	33	32	37	36	118	968	509	618	110	44	67
24....	56	34	32	35	37	208	1050	576	483	99	46	64
25....	56	34	32	34	38	292	1020	662	464	94	44	67
26....	55	32	33	35	40	256	868	715	471	88	42	60
27....	53	28	35	37	48	225	636	790	498	89	41	56
28....	51	26	33	37	56	172	667	928	468	91	42	55
29....	50	28	34	37	....	113	755	1030	667	85	46	57
30....	48	27	35	36	....	89	814	904	556	78	44	53
31....	44	....	35	35	....	73	....	832	....	76	47	....
Total	1708	1106	944	1066	1068	3430	14676	17854	19723	5249	1925	3079
Mean.	55.1	36.9	30.5	34.4	38.1	111	489	576	657	169	62.1	103
Max..	94	50	35	37	56	292	1050	1030	886	449	99	272
Min..	43	26	23	29	32	64	67	264	464	76	41	53
Acre-ft.	3390	2190	1870	2110	2120	6800	29110	35410	39120	10410	3820	6110

Total run-off for water year 1937-38=142,500 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Little Navajo River at Chromo, Colorado, for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	5.3	10	5.6	2.7	2.4	3.0	20	102	42	6.8	1.6	0.6
2....	4.3	9.3	4.2	2.5	2.5	3.0	33	122	39	7.1	1.8	.6
3....	3.8	8.4	7.2	2.5	2.4	3.0	25	137	34	5.0	1.7	.5
4....	3.6	7.4	9.6	2.6	2.7	3.1	18	146	31	2.9	1.6	.5
5....	3.5	7.8	6.9	2.7	2.9	3.1	23	152	29	2.1	1.7	.4
6....	4.8	8.0	5.0	2.9	3.1	3.3	25	149	28	1.8	1.8	.5
7....	5.6	8.0	3.7	2.9	2.7	3.6	23	152	22	1.7	1.8	.6
8....	6.1	7.8	3.8	2.7	2.4	4.3	39	150	13	1.7	1.8	.6
9....	6.1	8.0	3.0	2.5	2.5	6.0	48	136	10	1.6	1.8	.8
10....	5.3	8.0	2.5	2.4	2.5	14	78	119	10	1.4	1.7	.8
11....	4.5	8.0	2.6	2.6	2.5	27	94	120	9.3	2.9	1.4	.7
12....	4.3	8.0	2.7	2.8	2.6	8.2	91	118	9.3	8.5	1.4	.7
13....	4.2	8.0	2.7	3.1	2.7	7.9	112	114	8.5	8.5	1.1	.6
14....	4.0	8.4	2.9	2.5	3.1	7.9	157	107	8.9	7.1	.9	.6
15....	4.0	8.4	3.2	2.7	3.6	8.2	240	99	7.4	6.5	.8	.6
16....	4.0	8.0	3.5	2.9	3.3	6.7	220	93	6.8	4.0	.9	.6
17....	4.0	7.2	3.3	3.2	3.0	6.9	200	91	7.1	1.1	1.6	.6
18....	4.0	7.6	3.1	3.0	2.8	6.7	190	87	7.7	.9	1.8	.6
19....	4.2	7.6	3.2	2.9	2.8	6.9	170	80	7.4	1.3	1.8	.4
20....	6.7	7.9	3.2	2.7	2.5	7.2	180	73	7.1	.9	.9	.4
21....	6.1	7.9	3.3	2.6	2.4	7.9	200	66	6.8	.9	.8	.3
22....	5.6	7.6	3.5	2.3	2.4	10	170	62	6.8	1.0	.9	.3
23....	5.8	7.6	3.6	2.1	3.5	13	149	58	5.9	.9	.9	.3
24....	5.8	7.6	3.7	1.9	3.3	12	110	55	6.2	.8	.9	.3
25....	6.1	7.9	3.8	1.6	3.3	9.3	110	52	17	.6	.9	.3
26....	6.1	7.9	3.7	1.7	3.1	8.2	131	44	17	.9	.9	.3
27....	5.8	8.2	3.6	1.8	3.0	7.6	155	42	14	.6	.8	.3
28....	5.8	7.9	3.6	1.9	3.0	8.6	134	41	11	.8	.7	.4
29....	5.6	7.2	3.6	2.0	....	7.6	104	47	7.7	1.0	.5	.9
30....	8.6	7.6	3.5	2.1	....	9.3	99	52	7.1	1.2	.8	3.3
31....	10	....	3.0	2.2	....	12	....	46	....	1.4	.9	....
Total	163.6	239.2	120.8	77.0	79.0	245.5	3348	2912	437.0	83.9	38.9	18.4
Mean.	5.28	7.97	3.90	2.48	2.82	7.92	112	93.9	14.6	2.71	1.25	.61
Max..	10	10	9.6	3.2	3.6	27	240	152	42	8.5	1.8	3.3
Min..	3.5	7.2	2.5	1.6	2.4	3.0	18	41	5.9	.6	.5	.3
Acre-ft.	324	474	240	153	157	487	6640	5780	867	166	77	36

Total run-off for water year 1936-37=15,400 acre-feet.

Discharge of Little Navajo River at Chromo, Colorado, for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	1.3	1.8	1.6	1.9	2.2	*4.1	23	91	63	17	2.0	0.1
2....	.9	2.0	1.7	2.1	2.5	4.6	17	79	56	12	1.5	1.7
3....	.9	2.0	1.8	2.2	2.0	5.0	25	75	50	9.7	1.5	4.9
4....	.9	1.8	1.8	2.3	2.4	5.4	38	65	45	9.0	2.4	6.1
5....	.8	1.7	1.8	2.0	2.0	4.8	39	58	41	9.0	3.0	4.9
6....	.8	1.6	2.0	1.8	1.2	4.3	35	54	37	8.4	3.2	6.1
7....	.8	2.6	1.5	1.7	1.8	5.0	29	51	37	7.8	2.6	6.7
8....	.8	2.6	1.3	1.6	2.0	5.8	24	51	34	2.9	2.3	12
9....	.9	2.3	1.3	1.5	2.4	6.7	29	53	32	1.4	2.0	9.7
10....	1.0	2.3	1.5	1.5	2.7	8.0	36	50	31	.8	1.1	9.0
11....	.9	2.4	1.7	1.6	2.9	8.8	44	51	30	.8	.1	16
12....	.7	2.1	1.7	1.6	2.8	8.2	51	53	30	.5	.8	13
13....	.7	1.6	1.7	1.7	2.7	10	52	69	31	.2	2.6	9.0
14....	.6	1.7	1.6	1.8	2.6	12	43	90	29	12	2.8	7.5
15....	1.4	1.8	1.7	2.2	2.5	14	39	104	26	18	2.3	5.2
16....	2.9	1.6	1.5	2.6	2.0	13	42	100	22	7.3	1.6	5.0
17....	2.4	1.8	*1.6	2.5	1.8	15	53	95	20	5.5	1.4	4.4
18....	3.6	2.1	1.8	2.6	1.3	18	76	87	16	3.2	1.5	3.6
19....	3.3	1.6	1.8	2.3	1.7	21	87	80	13	2.3	1.0	3.8
20....	3.1	2.1	1.7	*2.1	2.2	22	87	80	12	9.0	.4	3.2
21....	2.9	2.3	1.6	1.8	*2.5	23	131	83	10	15	.2	3.8
22....	2.9	1.7	1.5	2.0	2.2	27	114	84	11	7.8	.2	3.8
23....	2.4	1.8	1.6	1.8	2.0	35	137	76	19	7.3	.2	3.8
24....	2.4	2.6	2.0	1.7	2.7	36	138	74	15	6.7	.2	3.8
25....	2.3	2.1	1.7	1.5	3.3	45	146	78	9.0	5.5	.2	3.2
26....	2.1	2.0	1.7	1.7	3.3	40	122	75	7.3	5.5	.1	2.9
27....	2.1	2.0	2.0	1.9	3.8	32	114	76	10	4.9	.1	1.7
28....	2.0	1.8	2.1	2.3	4.2	24	118	82	21	4.4	.5	1.4
29....	1.7	1.8	2.2	2.2	....	16	113	89	37	3.8	.5	1.7
30....	2.0	1.8	2.0	2.0	....	14	107	76	25	3.8	.2	1.1
31....	2.0	....	1.9	1.9	....	21	....	67	....	2.9	0	....
Total	53.5	59.4	53.4	60.4	67.7	508.7	2109	2296	819.3	204.4	38.5	159.1
Mean.	1.73	1.98	1.72	1.95	2.42	16.4	70.3	74.1	27.3	6.59	1.24	5.30
Max..	3.6	2.6	2.2	2.6	4.2	45	146	104	63	18	3.2	16
Min..	.6	1.6	1.3	1.5	1.2	4.1	17	50	7.3	.2	0	.1
Acre-ft.	106	118	106	120	134	1010	4180	4550	1630	405	76	316

Total run-off for water year 1937-38=12,750 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Piedra River at Bridge Ranger Station Near Pagosa Springs, Colo., for Year
Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....							29	221	482	276	78	38
2....							31	295	475	240	55	35
3....							29	354	454	195	50	39
4....							29	393	429	152	49	38
5....							29	406	400	130	50	37
6....							31	360	387	115	72	38
7....							28	357	372	105	60	37
8....							31	419	406	88	53	35
9....							47	488	403	69	47	32
10....							61	482	393	72	44	31
11....							90	506	435	197	40	30
12....							150	568	454	187	39	28
13....							185	632	485	185	36	24
14....							230	688	471	139	36	23
15....							270	732	429	95	36	23
16....							285	716	451	75	38	23
17....							250	724	488	68	40	22
18....							210	672	475	59	39	22
19....							240	608	448	53	40	22
20....							280	620	425	51	35	20
21....							290	628	413	50	34	20
22....							245	628	400	45	33	19
23....							226	628	378	48	32	20
24....							245	556	329	45	30	20
25....							288	475	322	45	30	18
26....							298	416	340	50	32	18
27....							267	422	312	59	32	17
28....							199	516	274	93	31	16
29....							211	576	257	88	30	18
30....							197	564	262	64	49	71
31....								516		55	62	
Total							5001	16166	12049	3193	1332	834
Mean.							167	521	402	103	43.0	27.8
Max.							298	732	488	276	78	71
Min.							28	221	257	45	30	16
Acre-ft.							9920	32060	23900	6330	2640	1650

Total run-off for period=76,500 acre-feet.

**Discharge of Piedra River at Bridge Ranger Station Near Pagosa Springs, Colo., for Year
Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	26	25				24	28	345	730	540	64	62
2....	26	25				22	26	262	708	420	63	98
3....	27	25				27	32	216	754	340	57	91
4....	28	22				24	35	168	790	290	56	98
5....	25	20				21	45	146	730	245	50	94
6....	26	20				19	49	131	686	213	43	84
7....	23	29				18	54	117	610	175	45	86
8....	23	23				19	53	112	566	151	42	91
9....	24	23				16	70	94	507	138	42	71
10....	23	23				14	159	87	498	124	38	87
11....	23	20				14	209	98	480	116	50	415
12....	23	21				14	223	131	561	109	57	468
13....	24	20				14	194	180	844	105	78	311
14....	23	22				15	127	307	692	124	66	232
15....	43	22				16	110	439	620	112	60	177
16....	45	20				17	110	414	620	98	51	149
17....	35	22				17	190	354	620	98	46	136
18....	35	20		*18		18	274	290	561	86	50	112
19....	28	17				21	280	272	480	81	47	101
20....	29	21				23	262	240	476	84	40	86
21....	29	18				28	293	250	590	83	37	74
22....	28	17				26	333	269	784	86	35	65
23....	28	16				24	358	290	692	87	35	68
24....	28	19				30	397	348	530	70	38	66
25....	26	18				36	374	404	480	65	37	66
26....	23	16				50	321	526	433	58	35	62
27....	23	16				53	272	620	401	84	37	57
28....	23	15				47	333	770	377	142	33	52
29....	24	15				39	374	814	814	89	34	52
30....	24	14				34	404	754	660	76	34	47
31....	26					32		760		68	42	
Total	841	604	775	527	448	772	5989	10208	18294	4557	1442	3658
Mean.	27.1	20.1	25	17	16	24.9	200	329	610	147	46.5	122
Max.	45	29				53	404	814	844	540	78	468
Min.	23	14				14	26	87	377	58	33	47
Acre-ft.	1670	1200	1540	1050	889	1530	11880	20250	36290	9040	2860	7260

Total run-off for water year 1937-38=95,460 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Williams Creek Near Bridge Ranger Station Near Pagosa Springs, Colo., for Year
Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	94	212	82	25	17
2....	130	218	78	24	16
3....	170	206	61	26	20
4....	270	194	56	20	18
5....	260	179	53	19	16
6....	240	164	48	27	14
7....	250	176	56	31	15
8....	280	194	52	22	14
9....	340	185	45	20	16
10....	330	135	41	19	15
11....	320	111	57	18	13
12....	330	111	64	16	12
13....	353	120	53	15	11
14....	341	128	45	15	10
15....	357	145	42	16	9.4
16....	365	140	38	15	8.8
17....	357	99	33	15	8.8
18....	309	116	29	15	9.4
19....	285	125	27	13	8.8
20....	297	132	25	12	8.8
21....	317	132	24	12	8.8
22....	313	132	22	11	8.8
23....	309	125	20	11	9.4
24....	301	140	20	10	8.8
25....	221	132	22	10	8.8
26....	185	132	21	12	8.8
27....	224	106	24	12	8.5
28....	230	94	43	11	8.0
29....	273	92	32	11	8.8
30....	273	82	26	15	16
31....	234	....	24	31	....
Total	8558	4257	1263	529	355.7
Mean.	276	142	40.7	17.1	11.9
Max..	365	218	82	31	20
Min...	94	82	20	10	8.0
Acre-ft.	16970	8440	2510	1050	706

Total run-off for period=29,680 acre-feet.

**Discharge of Williams Creek Near Bridge Ranger Station Near Pagosa Springs, Colo., for Year
Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	18	11	....	....	....	....	16	213	395	244	31	19
2....	16	11	....	....	....	....	15	164	384	191	27	34
3....	16	10	....	....	....	....	18	129	418	160	25	33
4....	15	10	....	....	....	....	22	110	443	135	25	37
5....	15	10	....	....	....	....	28	107	423	120	23	35
6....	13	9.5	....	....	....	....	28	90	374	102	22	31
7....	12	12	....	....	....	....	25	82	336	92	22	31
8....	11	12	....	....	....	....	23	88	309	82	21	31
9....	11	11	....	....	....	....	24	82	278	76	21	31
10....	13	11	....	....	....	....	30	76	278	71	19	75
11....	12	11	....	....	....	....	45	84	269	69	20	198
12....	12	10	....	....	....	....	75	110	309	61	21	295
13....	11	9.5	....	....	....	....	80	140	453	57	28	144
14....	11	*9.2	....	....	....	....	70	220	336	60	31	92
15....	18	9.0	....	....	....	....	52	341	309	54	28	74
16....	21	8.2	....	....	....	....	65	240	295	53	21	61
17....	16	9.0	....	....	....	....	95	188	295	51	19	56
18....	14	10	....	*7.8	....	....	160	181	278	45	20	47
19....	14	11	....	....	....	....	210	179	260	44	18	42
20....	14	11	....	....	....	....	220	150	273	46	15	37
21....	14	8.2	....	....	....	....	230	147	327	44	14	35
22....	14	7.8	....	....	....	....	280	157	350	40	12	34
23....	15	7.5	....	....	....	....	320	170	304	38	12	32
24....	15	8.0	....	....	....	....	345	220	248	33	13	30
25....	15	8.0	....	....	....	....	260	260	236	31	13	28
26....	14	8.0	....	....	....	....	210	322	232	28	13	27
27....	13	8.0	....	....	....	....	160	369	209	58	13	25
28....	13	7.8	....	....	....	....	180	433	181	74	13	25
29....	12	7.6	....	....	....	....	220	453	433	46	12	25
30....	11	7.0	....	....	....	....	280	428	318	41	12	25
31....	11	....	....	....	....	....	....	408	....	35	15	....
Total	430	283.3	263.5	217	182	496	3786	6339	9551	2281	599	1689
Mean.	13.9	9.44	8.5	7.0	6.5	16	126	204	318	73.6	19.3	56.3
Max..	21	12	....	....	....	....	345	453	453	244	31	295
Min...	11	7.0	....	....	....	....	15	76	181	28	12	19
Acre-ft.	853	562	523	430	361	984	7510	12570	18940	4520	1190	3350

Total run-off for water year 1937-38=51,790 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Weminuche Creek Near Bridge Ranger Station Near Pagosa Springs, Colo.,
for Year Ending Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....							15	138	217	63	28	31
2....							18	192	210	70	24	24
3....							17	275	204	56	22	28
4....							16	290	186	48	19	32
5....							16	328	166	45	19	29
6....							18	290	152	44	50	27
7....							17	294	154	44	49	32
8....							19	350	150	45	30	25
9....							25	375	150	43	24	23
10....							32	347	142	45	21	19
11....							60	345	154	58	18	16
12....							104	357	156	56	18	14
13....							150	394	149	41	16	14
14....							180	401	144	38	17	12
15....							210	417	130	37	18	12
16....							230	420	130	37	15	12
17....							200	443	128	41	14	12
18....							185	425	125	42	14	11
19....							190	370	120	36	18	11
20....							190	357	108	31	13	11
21....							220	360	100	27	12	11
22....							230	347	99	24	11	11
23....							202	330	96	22	11	11
24....							178	309	88	22	11	10
25....							174	266	77	22	12	9.8
26....							208	223	80	22	12	9.2
27....							232	219	99	25	14	8.4
28....							174	232	71	52	14	8.2
29....							135	268	65	68	12	13
30....							113	287	65	41	18	50
31....								249		31	63	
Total							3758	9898	3915	1276	638	536.6
Mean.							125	319	130	41.2	20.6	17.9
Max.							232	443	217	70	63	50
Min.							15	138	65	22	11	8.2
Acre-ft.							7450	19630	7770	2530	1270	1060

Total run-off for period=39,710 acre-feet.

**Discharge of Weminuche Creek Near Bridge Ranger Station Near Pagosa Springs, Colo.,
for Year Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	30	12					17	251	467	280	35	62
2....	27	11					16	205	435	223	31	111
3....	24	11					20	160	473	188	30	81
4....	21	11					25	135	487	163	30	86
5....	19	10					30	116	435	139	26	76
6....	18	9.6					30	98	401	118	23	60
7....	17	14					27	84	355	100	20	58
8....	16	14					25	85	326	87	20	68
9....	16	11					26	77	275	77	23	52
10....	15	12					33	70	282	63	22	56
11....	14	12					48	81	254	62	32	321
12....	14	10					81	116	275	60	37	345
13....	16	9.1					84	150	453	60	48	246
14....	14	8.9					73	249	362	60	29	165
15....	21	8.6					55	357	290	60	23	134
16....	23	7.4					67	365	270	58	20	116
17....	18	8.2					98	309	258	48	18	99
18....	19	10					172	249	244	42	17	81
19....	16	8.9					225	225	194	39	16	70
20....	16	11					234	192	196	39	14	57
21....	16	9.6					239	186	230	40	13	51
22....	16	9.4					292	204	275	40	13	48
23....	17	7.7					335	208	258	41	20	44
24....	16	9.1					345	251	214	30	15	39
25....	16	8.5					330	297	180	28	14	35
26....	14	8.2					290	386	166	26	14	31
27....	15	8.2					230	462	170	47	13	27
28....	15	8.0					270	504	159	110	13	30
29....	13	8.0					311	529	438	63	13	27
30....	12	7.0					370	506	381	47	12	23
31....	12							484		40	16	
Total	536	293.4	201.5	186	162.4	527	4398	7591	9203	2478	670	2699
Mean.	17.3	9.78	6.5	6.0	5.8	17	147	245	307	79.9	21.6	90.0
Max.	30	14					370	529	487	280	48	345
Min.	12	7.0					16	70	159	26	12	23
Acre-ft.	1060	582	400	369	322	1050	8720	15060	18250	4920	1330	5350

Total run-off for water year 1937-38=57,410 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

**Discharge of Los Pinos River Near Weminuche Pass, Colo., for Year Ending
Sept. 30, 1937.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	17	10	8.6
2....	12	10	7.3
3....	7.3	9.0	7.0
4....	7.2	7.3	6.8
5....	7.0	8.6	6.6
6....	6.8	11	7.3
7....	32	6.8	8.4	7.5
8....	32	6.8	8.4	7.7
9....	32	6.6	8.1	7.7
10....	32	6.8	7.7	6.8
11....	35	8.4	7.5	4.6
12....	37	7.0	7.9	4.2
13....	38	7.5	7.9	4.2
14....	32	7.5	8.1	4.2
15....	29	7.3	8.1	4.2
16....	35	7.5	8.1	4.6
17....	38	7.5	8.2	4.4
18....	35	7.3	8.8	4.1
19....	32	7.3	8.1	4.1
20....	29	7.3	7.7	4.0
21....	28	7.3	7.7	4.2
22....	26	7.2	7.7	4.6
23....	24	7.2	7.7	4.7
24....	22	7.2	8.2	4.4
25....	20	7.2	8.8	4.0
26....	19	9.5	9.1	3.8
27....	17	8.6	8.8	3.8
28....	16	13	8.8	3.6
29....	15	13	8.8	6.3
30....	14	12	16	6.6
31....	10	13	.....
Total	669	261.1	276.1	161.9
Mean.	27.9	8.42	8.91	5.40
Max..	38	17	16	8.6
Min..	14	6.6	7.3	3.6
Acre-ft.	1330	518	548	321

Total run-off for period=2,720 acre-feet.

**Discharge of Los Pinos River Below Snowslide Canyon Near Weminuche Pass, Colo., for Year
Ending Sept. 30, 1938.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	.....	.....	.....	.....	.....	.....	.....	340	142	23	33
2....	16	.....	.....	.....	.....	.....	.....	.....	310	120	23	41
3....	15	.....	.....	.....	.....	.....	.....	.....	360	106	23	40
4....	14	.....	.....	.....	.....	.....	.....	.....	430	87	26	39
5....	11	.....	.....	.....	.....	.....	.....	.....	390	75	27	36
6....	11	.....	.....	.....	.....	.....	.....	.....	340	67	26	35
7....	11	.....	.....	.....	.....	.....	.....	.....	280	55	25	33
8....	10	.....	.....	.....	.....	.....	.....	.....	260	54	25	34
9....	11	.....	.....	.....	.....	.....	.....	.....	250	47	25	31
10....	10	.....	.....	.....	.....	.....	.....	.....	240	44	26	30
11....	10	.....	.....	.....	.....	.....	.....	.....	246	43	27	69
12....	10	.....	.....	.....	.....	.....	.....	.....	293	43	23	132
13....	10	.....	.....	.....	.....	.....	.....	.....	419	44	24	96
14....	8.5	.....	.....	.....	.....	.....	.....	.....	253	42	26	77
15....	11	.....	.....	.....	.....	.....	.....	.....	246	39	29	45
16....	11	.....	.....	.....	.....	.....	.....	.....	269	35	26	43
17....	11	.....	.....	.....	.....	.....	.....	.....	296	31	21	41
18....	11	.....	.....	.....	.....	.....	.....	.....	250	30	20	47
19....	15	.....	.....	.....	.....	.....	.....	.....	237	30	19	44
20....	13	.....	.....	.....	.....	.....	.....	.....	282	30	18	38
21....	9.5	.....	.....	.....	.....	.....	.....	May 23	366	30	18	37
22....	9.0	.....	.....	.....	.....	.....	.....	to 31	434	32	18	33
23....	9.5	.....	.....	.....	.....	.....	.....	*115	349	30	18	30
24....	9.0	.....	.....	.....	.....	.....	.....	130	276	26	18	28
25....	8.5	.....	.....	.....	.....	.....	.....	160	246	24	18	26
26....	8.0	.....	.....	.....	.....	.....	.....	250	231	24	19	25
27....	8.5	.....	.....	.....	.....	.....	.....	330	199	36	18	26
28....	8.5	.....	.....	.....	.....	.....	.....	400	193	36	16	26
29....	8.5	.....	.....	.....	.....	.....	.....	470	370	29	19	25
30....	8.0	.....	.....	.....	.....	.....	.....	377	177	25	22	25
31....	8.0	.....	.....	.....	.....	.....	.....	360	.....	24	20	.....
Total	329.5	.....	.....	.....	.....	.....	.....	2592	8832	1480	686	1265
Mean.	10.6	.....	.....	.....	.....	.....	.....	288	294	47.7	22.1	42.2
Max..	16	.....	.....	.....	.....	.....	.....	470	434	142	29	132
Min..	8.0	.....	.....	.....	.....	.....	.....	115	177	24	16	25
Acre-ft.	654	.....	.....	.....	.....	.....	.....	5140	17520	2940	1360	2510

Total run-off for period=30,124 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Pine River Near Bayfield, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	184	203	119	66	70	65	117	811	1090	624	266	335
2....	170	196	89	62	87	66	138	1030	1130	618	240	274
3....	165	158	85	71	87	67	143	1420	1090	571	222	251
4....	160	164	96	71	88	61	138	1740	959	526	209	254
5....	155	184	92	74	77	62	138	1940	894	509	209	240
6....	162	176	61	75	75	66	151	1640	852	482	258	219
7....	160	176	72	74	63	68	148	1510	865	455	247	236
8....	157	161	80	74	68	75	156	1980	1000	439	209	206
9....	148	153	78	74	117	78	184	2260	1020	402	196	187
10....	141	151	72	70	106	82	222	2200	872	378	184	167
11....	134	148	70	70	68	90	286	2180	1040	408	167	153
12....	128	148	71	74	70	102	392	2260	1110	550	156	148
13....	125	148	68	71	70	102	498	2350	1060	500	145	140
14....	121	151	75	68	67	102	624	2450	1050	397	145	135
15....	121	153	80	72	66	98	886	2430	944	354	140	135
16....	126	158	82	70	67	96	1080	2340	997	326	145	130
17....	128	158	80	70	67	100	1080	2430	1080	303	167	126
18....	128	161	67	68	67	106	1000	2300	1070	282	161	124
19....	126	156	63	70	63	96	1060	1900	1020	266	156	124
20....	167	148	72	63	71	94	838	1800	982	244	143	117
21....	176	148	78	66	92	104	967	1860	982	226	130	114
22....	167	143	68	71	65	114	1160	1900	959	216	126	114
23....	167	133	68	71	70	126	1020	1850	930	206	119	112
24....	158	124	70	71	65	108	894	1640	865	206	112	110
25....	158	124	75	70	66	117	908	1290	771	203	108	106
26....	158	114	74	65	66	110	1160	1080	725	209	112	104
27....	151	114	59	65	71	106	1380	1080	818	206	130	100
28....	148	110	71	66	65	104	1100	1220	719	354	173	98
29....	145	114	75	67	....	106	894	1370	706	428	176	112
30....	193	104	62	63	....	98	784	1300	662	358	212	219
31....	203	....	68	63	....	108	....	1190	....	298	434	....
Total	4730	4479	2340	2145	2074	2877	19546	54751	28262	11544	5597	4890
Mean.	153	149	75.5	69.4	74.1	92.8	652	1766	942	372	181	163
Max.	203	203	119	75	117	126	1380	2450	1130	624	434	335
Min.	121	104	59	62	63	61	117	811	662	203	108	98
Acre-ft.	9380	8880	4640	4250	4110	5710	38770	108600	56060	22900	11100	9700

Total run-off for water year 1936-37=284,100 acre-feet.

Discharge of Pine River Near Bayfield, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	187	107	53	48	56	69	127	1530	2400	2220	324	415
2....	174	104	58	47	58	72	123	1110	2210	1490	305	741
3....	177	102	64	50	56	93	134	894	2480	1320	302	714
4....	177	100	58	49	58	125	150	727	2570	1190	284	649
5....	164	97	52	47	58	92	167	649	2410	1080	277	554
6....	150	95	58	47	59	75	172	606	2320	944	257	500
7....	141	105	52	52	53	82	172	542	1860	852	257	520
8....	134	102	54	50	56	84	179	494	1700	789	260	510
9....	127	95	52	48	58	82	200	463	1560	741	260	460
10....	123	98	53	48	56	87	231	449	1630	674	247	490
11....	119	98	45	49	58	84	270	468	1540	624	254	1480
12....	117	93	48	49	64	90	340	576	1700	600	291	1100
13....	115	87	48	52	70	88	345	761	2230	576	420	820
14....	109	86	50	52	60	87	332	1270	1760	594	392	630
15....	129	84	51	53	60	76	284	1790	1700	594	321	560
16....	143	80	49	55	60	86	277	1780	1760	554	277	504
17....	127	81	49	52	58	92	328	1490	1850	520	257	468
18....	134	82	37	53	52	87	449	1200	1860	504	238	420
19....	132	76	35	54	50	87	636	1090	1630	484	222	415
20....	127	81	43	54	63	98	754	951	1600	478	206	383
21....	127	80	38	52	60	113	817	922	2290	444	197	361
22....	123	76	38	50	58	109	973	1050	2580	434	187	345
23....	125	72	41	53	52	113	1210	1110	2360	430	187	321
24....	125	78	43	55	56	134	1400	1360	2000	383	184	302
25....	123	70	42	54	63	155	1480	1670	1830	353	179	287
26....	119	69	45	56	60	177	1270	2080	1780	345	179	274
27....	117	58	50	55	64	167	1030	2260	1710	420	184	257
28....	117	54	44	55	64	155	1250	2520	1540	504	184	250
29....	113	56	46	56	....	148	1570	2670	2970	415	187	241
30....	109	54	47	55	....	143	1790	2550	2420	366	250	228
31....	107	....	49	53	....	123	....	2480	....	336	257	....
Total	4111	2520	1492	1603	1640	3273	18460	39512	60250	21258	7826	15199
Mean.	133	84.0	48.1	51.7	58.6	106	615	1275	2010	686	252	507
Max.	187	107	64	56	70	177	1790	2670	2970	2220	420	1480
Min.	107	54	35	47	50	69	123	449	1540	336	179	228
Acre-ft.	8150	5000	2960	3180	3250	6490	36610	78370	119500	42160	15520	30150

Total run-off for water year 1937-38=351,300 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Pine or Los Pinos River at Ignacio, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	17	110	87	70	80	95	390	899	688	212	21	55
2....	13	132	82	60	75	100	491	1060	718	206	21	25
3....	11	82	73	60	75	100	461	1380	718	176	19	23
4....	9.6	70	80	60	70	110	370	1750	601	148	23	24
5....	9.6	80	80	70	70	120	400	2020	528	139	79	23
6....	10	85	84	75	65	120	497	1750	467	89	41	22
7....	11	93	85	80	65	130	455	1480	428	68	30	23
8....	9.6	93	87	75	60	130	554	1880	528	50	27	23
9....	8.4	89	91	70	60	137	695	2310	534	30	24	25
10....	7.6	89	85	70	65	150	980	2090	416	25	19	23
11....	6.8	87	82	65	70	180	1020	2020	509	100	16	21
12....	7.2	85	84	70	70	202	1060	1950	580	161	14	21
13....	8.0	87	87	75	70	230	1300	2160	534	148	14	18
14....	9.2	91	89	80	75	209	1450	2380	528	93	13	14
15....	11	91	93	75	80	223	1750	2620	428	48	13	13
16....	12	95	91	70	90	219	2020	2380	450	29	13	13
17....	12	102	91	70	80	268	1680	2460	503	24	12	13
18....	12	104	80	65	75	284	1480	2310	528	20	12	13
19....	12	102	85	60	70	234	1490	1820	509	18	11	13
20....	35	93	82	60	65	209	1400	1600	455	16	11	12
21....	53	89	89	55	60	241	1430	1620	438	15	12	12
22....	62	87	80	55	70	318	1620	1620	450	14	11	12
23....	71	97	78	50	75	355	1500	1680	416	12	9.6	13
24....	71	112	76	60	80	256	1230	1450	355	11	8.8	12
25....	68	110	85	65	90	256	1160	1180	293	11	8.0	11
26....	60	110	87	70	90	234	1370	856	245	10	13	11
27....	41	106	82	75	85	216	1680	725	318	11	18	9.6
28....	32	102	80	75	90	234	1390	864	314	15	14	8.4
29....	32	102	75	75	...	226	1110	1020	272	76	15	8.8
30....	70	89	70	75	...	199	935	1050	234	46	15	32
31....	93	...	80	75	...	272	...	890	...	23	50	...
Total	885.0	2864	2580	2110	2070	6257	33368	51274	13985	2044	607.4	546.8
Mean.	28.5	95.5	83.2	68.1	73.9	202	1112	1654	466	65.9	19.6	18.2
Max..	93	132	93	80	90	355	2020	2620	718	212	79	55
Min..	6.8	70	70	50	60	95	370	725	234	10	8.0	8.4
Acre-ft.	1760	5680	5120	4190	4110	12410	66180	101700	27740	4050	1200	1080

Total run-off for water year 1936-37=235,200 acre-feet.

Discharge of Pine or Los Pinos River at Ignacio, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	19	71	35	66	51	197	187	1760	2440	1390	12	37
2....	15	71	20	68	50	169	164	1220	2060	1080	11	382
3....	15	69	20	70	50	303	200	943	2280	931	11	423
4....	18	69	19	67	50	418	220	779	2520	818	9.9	256
5....	18	68	18	60	51	224	339	707	2280	722	11	244
6....	17	64	21	54	53	158	335	668	2060	634	11	232
7....	17	73	58	48	56	136	287	612	1600	537	9.5	220
8....	17	74	58	43	59	131	260	535	1380	450	9.1	307
9....	14	34	62	41	63	126	283	482	1080	373	8.3	168
10....	14	31	62	42	69	124	339	439	1230	335	7.6	201
11....	14	30	62	*45	74	126	402	413	1080	252	7.2	1000
12....	15	25	57	48	114	161	517	466	1150	217	6.8	1300
13....	16	24	63	52	119	200	560	626	1660	201	56	900
14....	17	23	64	57	95	194	567	997	1420	182	86	600
15....	26	23	71	60	91	144	477	1560	1180	166	35	495
16....	74	23	66	61	85	166	460	1600	1230	139	15	442
17....	91	56	64	60	80	203	512	1300	1260	103	11	389
18....	87	62	62	59	77	181	668	997	1440	69	9.5	336
19....	87	63	55	58	75	194	970	862	1150	58	8.0	283
20....	78	62	50	56	74	227	1160	707	1130	45	6.8	256
21....	80	63	53	54	73	279	1250	654	1720	40	6.4	227
22....	80	62	56	53	68	220	1330	715	2200	33	5.4	207
23....	78	62	59	54	68	207	1500	699	2130	27	4.9	180
24....	78	62	60	55	68	248	1640	889	1660	18	4.6	163
25....	78	63	61	56	71	304	1760	1040	1380	14	4.3	139
26....	81	62	60	*58	69	354	1620	1570	1290	12	4.3	129
27....	80	62	59	59	74	317	1160	1880	1200	11	4.3	96
28....	78	57	55	57	121	287	1240	2090	1060	29	4.0	74
29....	74	52	57	55	...	260	1570	2610	2120	23	4.0	69
30....	73	46	61	53	...	234	1820	2440	2420	14	4.0	58
31....	73	...	64	52	...	191	...	2360	...	12	4.6	...
Total	1522	1606	1632	1721	2048	6683	23797	34620	48810	8935	392.5	9713
Mean.	49.1	53.5	52.6	55.5	73.1	216	793	1117	1627	288	12.7	324
Max..	91	74	71	70	121	418	1820	2610	2520	1390	86	1300
Min..	14	23	18	41	50	124	164	413	1060	11	4.0	37
Acre-ft.	3020	3190	3240	3410	4060	13260	47200	68670	96810	17720	779	19270

Total run-off for water year 1937-38=280,600 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Animas River at Howardsville, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	31	27						205	246	238	61	62
2....	31	28						250	282	224	59	58
3....	31	30						300	303	209	56	56
4....	30	31						370	274	180	53	53
5....	30	31						500	234	167	51	53
6....	31	32						450	220	167	55	59
7....	30	33						447	234	162	51	59
8....	30	33						514	295	137	48	55
9....	30	33						580	286	132	47	52
10....	29	33						538	295	116	46	50
11....	29	34						502	366	119	44	47
12....	30	34						544	358	111	43	43
13....	30	36						628	354	111	42	41
14....	29	38						628	337	104	42	39
15....	29	40						628	320	97	41	37
16....	29	40						640	370	90	41	37
17....	28	38						634	404	90	37	36
18....	28	36						568	396	74	32	35
19....	30	33						474	383	72	32	34
20....	31	33						452	379	69	32	33
21....	31	33						502	366	62	32	33
22....	29	30						532	354	61	31	33
23....	29	28						486	328	59	30	34
24....	29	28						391	303	58	32	33
25....	28	28						299	295	62	36	32
26....	28	27						254	282	56	35	30
27....	27	26						324	254	66	38	30
28....	27	26						404	246	67	41	29
29....	26	26						400	266	70	41	33
30....	27	25						337	266	67	44	37
31....	27							278		64	56	
Total	904	950						14059	9296	3351	1329	1263
Mean.	29.2	31.7						454	310	108	42.9	42.1
Max..	31	40						640	404	238	61	62
Min..	26	25						205	220	56	30	29
Acre-ft.	1790	1880						27890	18440	6650	2640	2510

Total run-off for period=61,800 acre-feet.

Discharge of Animas River at Howardsville, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	38	31	24				17	130	647	649	137	89
2....	37	32	24				17	119	616	637	132	93
3....	37	33	23				17	102	736	600	125	104
4....	36	34	24				17	90	790	577	112	98
5....	35	35	24				17	80	797	524	108	89
6....	33	34	23				17	72	671	469	106	84
7....	32	31					17	62	520	431	106	80
8....	32	29					17	55	428	421	108	77
9....	31	27					17	53	423	411	110	72
10....	31	25					19	52	469	386	106	80
11....	30	25					19	70	418	354	96	134
12....	31	27					22	110	520	324	95	147
13....	30	29					26	160	665	321	114	147
14....	29	27					30	254	469	324	108	130
15....	32	27					30	258	452	332	95	116
16....	32	26					35	258	532	317	86	108
17....	30	26					50	231	697	305	77	100
18....	31	26					70	186	743	287	72	89
19....	27	27					90	173	716	265	66	80
20....	28	25					95	156	776	241	65	76
21....	29	25					100	167	1360	218	62	77
22....	30	24					115	176	1020	199	60	71
23....	30	24					125	162	844	183	57	65
24....	30	24					130	213	759	180	54	62
25....	31	23					135	295	792	178	52	60
26....	31	23					120	387	792	178	51	53
27....	31	23					110	502	752	180	48	50
28....	32	23					115	622	707	178	46	48
29....	31	24					125	697	850	165	46	46
30....	31	25					140	653	740	154	51	45
31....	30							671		144	72	
Total	978	814	142				1854	7216	20701	10132	2623	2570
Mean.	31.5	27.1	23.7				61.8	233	690	327	84.6	85.7
Max..	38	35	24				140	697	1360	649	137	147
Min..	27	23	23				17	52	418	144	46	45
Acre-ft.	1940	1610	282				3680	14310	41060	20100	5200	5100

Total run-off for period=93,282 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Animas River at Durango, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	320	307	221	165	162	187	325	1140	2000	1280	509	427
2....	316	298	218	158	178	195	366	1500	2010	1270	472	407
3....	303	261	211	178	170	201	396	2190	2160	1150	455	376
4....	303	250	218	190	172	198	386	2610	2120	1050	416	366
5....	298	286	221	190	187	192	371	3090	1860	999	411	348
6....	303	290	198	195	190	204	411	2650	1650	958	472	338
7....	303	294	204	198	207	211	411	2330	1540	910	491	357
8....	294	290	190	195	172	224	416	3050	1750	886	427	343
9....	286	277	198	195	172	250	503	3570	1830	807	396	329
10....	290	281	175	178	181	261	616	3720	1620	762	381	316
11....	277	273	170	184	192	286	784	3710	1950	815	343	298
12....	265	259	181	175	201	307	942	3660	2120	1060	316	294
13....	261	273	172	190	198	338	1120	3950	1960	999	307	290
14....	261	259	178	175	172	316	1310	4300	1980	910	290	290
15....	261	273	195	170	221	303	1660	4430	1680	807	281	286
16....	258	269	207	184	221	307	2020	4410	1760	724	286	261
17....	258	290	218	172	207	325	1720	4630	2050	652	329	254
18....	254	290	198	175	198	329	1490	4670	2160	595	338	242
19....	254	281	187	184	198	316	1630	3950	2060	554	316	231
20....	298	273	187	140	192	298	1580	3410	1960	515	294	221
21....	307	269	190	170	201	303	1790	3500	2000	478	286	218
22....	298	265	195	184	198	316	2160	3610	1970	438	281	218
23....	281	261	187	184	195	348	1960	3560	1920	416	269	221
24....	277	258	181	165	195	325	1530	3310	1670	401	261	224
25....	269	254	190	160	195	329	1390	2590	1530	381	254	221
26....	261	242	195	150	201	320	1720	2070	1540	381	254	221
27....	269	235	178	170	192	303	2240	1900	1630	438	286	221
28....	258	235	172	168	192	303	1770	2290	1440	497	286	221
29....	254	238	198	172	....	298	1400	2800	1440	631	311	235
30....	281	224	175	165	....	290	1160	2690	1380	588	316	361
31....	298	....	187	178	....	303	....	2380	....	568	361	....
Total	8716	8075	5995	5457	5360	8686	35577	97670	54740	22920	10695	8634
Mean.	281	269	193	176	191	280	1186	3151	1825	739	345	288
Max..	320	307	221	198	221	348	2240	4670	2160	1280	509	427
Min..	254	224	170	140	162	187	325	1140	1380	381	254	218
Acre-ft.	17290	16020	11890	10820	10630	17230	70570	193700	108600	45460	21210	17130

Total run-off for water year 1936-37=540,600 acre-feet.

Discharge of Animas River at Durango, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	378	239	169	163	180	205	332	2850	5090	3880	656	457
2....	346	242	166	160	194	220	315	2090	4410	3180	619	726
3....	328	239	190	173	180	307	319	1700	4670	2860	600	838
4....	319	235	187	180	173	378	328	1440	5620	2750	560	808
5....	315	231	180	160	180	274	383	1290	5400	2520	538	743
6....	294	227	176	134	153	235	422	1210	5110	2250	510	638
7....	282	231	183	128	146	223	402	1090	4310	1980	510	619
8....	270	235	187	150	166	242	417	977	3370	1800	499	619
9....	258	227	187	150	176	239	494	932	2850	1730	521	566
10....	250	223	176	160	180	227	638	905	3100	1640	516	549
11....	246	227	180	150	180	239	779	941	2750	1550	494	1000
12....	242	220	187	160	205	258	1140	1120	2910	1400	494	1240
13....	239	220	201	169	169	282	1146	1350	3920	1400	613	1160
14....	235	216	194	169	163	282	1120	2120	3860	1480	688	923
15....	254	212	190	180	194	246	905	3150	3130	1480	600	786
16....	303	216	180	183	190	246	845	3380	3230	1420	532	701
17....	274	205	183	166	187	258	941	2960	3420	1330	488	644
18....	258	220	183	173	166	258	1380	2380	3880	1260	457	582
19....	266	216	169	183	153	258	2010	2120	3500	1190	427	543
20....	254	212	153	187	187	270	2150	1850	3200	1110	393	510
21....	254	205	143	180	176	311	2120	1730	4310	1030	364	504
22....	250	201	143	166	163	337	2470	1980	6100	968	346	457
23....	242	208	131	180	163	319	2710	1910	5090	878	337	427
24....	254	205	143	143	166	364	2960	2210	4130	816	337	417
25....	254	205	128	137	169	427	3120	2600	3790	764	332	402
26....	254	194	116	183	166	521	2940	3250	3880	743	319	388
27....	254	194	150	190	176	504	2070	3830	3620	764	315	373
28....	254	183	156	190	187	452	2140	4290	3280	869	307	360
29....	258	183	153	173	....	427	2710	5450	3860	801	311	346
30....	250	183	153	169	....	398	2890	5370	5940	736	346	332
31....	250	....	160	160	....	346	....	4990	....	695	383	....
Total	8385	6454	5197	5149	4888	9553	42590	73465	121730	47274	14412	18668
Mean.	270	215	168	166	175	308	1420	2370	4058	1525	465	622
Max..	378	242	201	190	205	521	3120	5450	6100	3880	688	1240
Min..	235	183	116	128	146	205	315	905	2750	695	307	332
Acre-ft.	16630	12800	10310	10210	9700	18950	84480	145700	241400	93770	28590	37030

Total run-off for water year 1937-38=709,600 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cement Creek Near Silverton, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	9.8	13	....	....	....	....	....	54	59	58	18	16
2....	9.2	12	....	....	....	....	....	62	59	55	16	14
3....	9.2	9.2	....	....	....	....	....	72	72	56	16	14
4....	9.2	9	....	....	....	....	....	90	72	52	16	12
5....	9.2	9	....	....	....	....	....	110	64	50	18	11
6....	10	9	....	....	....	....	....	98	59	51	23	10
7....	11	9	....	....	....	....	....	98	62	45	21	12
8....	9.8	9	....	....	....	....	....	109	77	42	20	14
9....	9.8	9	....	....	....	....	....	130	77	38	18	12
10....	9.2	9	....	....	....	....	....	122	80	36	18	12
11....	8.6	9	....	....	....	....	....	115	96	38	19	13
12....	7.4	9	....	....	....	....	....	125	92	33	17	11
13....	9.2	9	....	....	....	....	....	134	90	32	16	11
14....	9.2	9	....	....	....	....	....	142	82	32	18	12
15....	8.6	9	....	....	....	....	....	136	83	28	18	12
16....	8.0	9	....	....	....	....	....	157	94	28	19	11
17....	8.6	9	....	....	....	....	....	137	104	28	21	11
18....	7.4	9	....	....	....	....	....	124	102	26	17	10
19....	9.8	9	....	....	....	....	....	120	94	24	14	9.6
20....	9.8	9	....	....	....	....	....	112	90	24	14	8.4
21....	10	9	....	....	....	....	....	116	85	23	16	10
22....	9.2	9	....	....	....	....	....	116	86	22	14	10
23....	9.2	*9	....	....	....	....	....	112	83	21	12	9.6
24....	9.8	9	....	....	....	....	....	100	72	23	12	9.2
25....	8.6	9	....	....	....	....	....	80	67	20	12	9.2
26....	9.2	9	....	....	....	....	....	82	67	19	13	8.8
27....	10	9	....	....	....	....	....	82	61	23	12	8.4
28....	13	9	....	....	....	....	....	112	59	26	14	8.8
29....	12	9	....	....	....	....	....	110	61	23	13	14
30....	14	9	....	....	....	....	....	84	58	21	14	14
31....	15	....	....	....	....	....	....	68	....	20	16	....
Total	303.0	277.2	....	....	....	....	....	3309	2307	1017	505	336.0
Mean.	9.77	9.2	....	....	....	....	....	107	76.9	32.8	16.3	11.2
Max..	15	13	....	....	....	....	....	157	104	58	23	16
Min..	7.4	....	....	....	....	....	....	54	58	19	12	8.4
Acre-ft.	601	550	....	....	....	....	....	6560	4580	2020	1000	666

Total run-off for period = 15,977 acre-feet.

*Discharge measurement.

Discharge of Mineral Creek Near Silverton, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	31	25	17	....	....	....	....	150	240	260	68	65
2....	32	25	....	....	....	....	....	160	250	240	63	52
3....	32	26	....	....	....	....	....	200	285	220	56	48
4....	32	27	....	....	....	....	....	260	285	200	56	45
5....	32	27	....	....	....	....	....	300	240	185	62	44
6....	35	27	....	....	....	....	....	340	236	170	84	44
7....	32	27	....	....	....	....	....	319	240	175	65	41
8....	31	28	....	....	....	....	....	313	291	160	58	39
9....	30	28	....	....	....	....	....	378	264	140	52	37
10....	29	28	....	....	....	....	....	336	296	135	48	35
11....	27	29	....	....	....	....	....	324	366	125	44	32
12....	27	29	....	....	....	....	....	402	360	125	42	31
13....	27	29	....	....	....	....	....	466	360	118	39	29
14....	27	30	....	....	....	....	....	548	324	115	38	30
15....	27	31	....	....	....	....	....	541	308	105	40	26
16....	27	31	....	....	....	....	....	590	378	98	62	28
17....	26	31	....	....	....	....	....	597	415	94	68	28
18....	25	29	....	....	....	....	....	576	390	90	65	28
19....	27	28	....	....	....	....	....	486	366	82	51	27
20....	29	27	....	....	....	....	....	452	360	75	44	26
21....	29	27	....	....	....	....	....	513	360	70	41	27
22....	27	26	....	....	....	....	....	548	348	65	39	27
23....	27	24	....	....	....	....	....	500	308	60	35	28
24....	26	20	....	....	....	....	....	378	264	60	34	27
25....	25	19	....	....	....	....	....	274	255	60	33	25
26....	27	18	....	....	....	....	....	310	245	58	34	24
27....	24	17	....	....	....	....	....	255	222	70	34	24
28....	23	17	....	....	....	....	....	330	218	96	36	23
29....	23	18	....	....	....	....	....	372	270	98	36	34
30....	24	17	....	....	....	....	....	302	260	77	42	40
31....	25	....	....	....	....	....	....	259	....	73	59	....
Total	865	765	....	....	....	....	....	11779	9004	3699	1528	1014
Mean.	27.9	25.5	....	....	....	....	....	380	300	119	49.3	33.8
Max..	35	31	....	....	....	....	....	597	415	260	84	65
Min..	23	17	....	....	....	....	....	150	218	58	33	23
Acre-ft.	1720	1520	....	....	....	....	....	23360	17860	7340	3030	2010

Total run-off for period = 56,840 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Mineral Creek Near Silverton, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	37	29	....	....	....	....	18	115	653	621	149	88
2....	36	29	....	....	....	....	18	106	628	560	130	105
3....	37	30	....	....	....	....	17	92	766	548	120	111
4....	37	32	....	....	....	....	17	79	746	525	112	114
5....	34	33	....	....	....	....	16	70	746	459	108	88
6....	32	30	....	....	....	....	16	62	666	425	105	75
7....	30	27	....	....	....	....	15	55	501	393	102	72
8....	29	25	....	....	....	....	15	51	420	384	102	70
9....	28	20	....	....	....	....	17	50	434	375	111	63
10....	27	18	....	....	....	....	20	50	469	344	99	88
11....	27	17	....	....	....	....	24	58	425	320	90	213
12....	27	20	....	....	....	....	24	75	560	316	88	209
13....	25	23	....	....	....	....	33	115	719	312	108	172
14....	26	20	....	....	....	....	31	180	454	324	105	130
15....	33	19	....	....	....	....	30	236	454	328	85	108
16....	32	19	....	....	....	....	34	231	501	316	75	90
17....	30	19	....	....	....	....	40	198	584	300	68	78
18....	31	19	....	....	....	....	60	160	640	284	63	70
19....	28	18	....	....	....	....	78	143	542	260	59	61
20....	28	20	....	....	....	....	90	126	596	236	56	63
21....	28	20	....	....	....	....	96	134	1210	205	52	52
22....	29	18	....	....	....	....	105	146	975	186	50	50
23....	30	16	....	....	....	....	115	143	780	172	50	50
24....	30	17	....	....	....	....	120	186	666	169	50	46
25....	31	16	....	....	....	....	125	250	800	155	48	44
26....	31	15	....	....	....	....	115	342	786	160	52	42
27....	32	15	....	....	....	....	105	440	673	170	50	40
28....	31	15	....	....	....	....	110	554	590	165	48	40
29....	30	15	....	....	....	....	120	686	1240	159	54	38
30....	30	15	....	....	....	....	135	640	821	152	68	37
31....	29	....	....	....	....	....	....	679	....	146	65	....
Total	945	629	....	....	....	....	1759	6452	20045	9469	2522	2507
Mean.	30.5	21.0	....	....	....	....	58.6	208	668	305	81.4	83.6
Max.	37	33	....	....	....	....	135	686	1240	621	149	213
Min.	25	15	....	....	....	....	15	50	420	146	48	37
Acre-ft.	1870	1250	....	....	....	....	3490	12800	39760	18780	5000	4970

Total run-off for period=87,920 acre-feet.

Discharge of Cascade Creek Near Tacoma, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	9.3	8.2	6.1	5.1	5.1	5.1	64	155	66	26	31
2....	14	9.3	8.2	6.1	5.1	5.1	5.6	112	162	73	24	31
3....	12	9.3	8.2	6.1	5.1	5.1	5.1	178	192	100	22	24
4....	12	9.3	8.2	6.1	5.1	5.1	5.6	207	192	53	23	22
5....	12	9.3	7.1	5.1	5.1	5.1	5.6	199	145	53	24	20
6....	12	9.3	7.1	5.1	5.1	5.1	5.1	130	135	43	24	26
7....	12	9.3	7.1	5.1	5.1	5.1	6.1	130	143	44	24	26
8....	12	9.3	7.1	5.1	5.1	5.1	6.6	195	141	47	20	20
9....	10	9.3	7.1	5.1	5.1	5.1	7.1	234	149	42	17	17
10....	10	8.6	7.1	5.1	5.1	5.1	7.7	218	164	37	17	15
11....	9.0	8.2	7.1	5.1	5.1	5.1	7.8	225	192	60	16	12
12....	9.0	9.3	7.1	5.1	5.1	5.1	8.2	268	185	60	15	12
13....	7.9	9.3	7.1	5.1	5.1	5.1	9.3	342	160	58	15	12
14....	7.9	9.3	7.1	5.1	5.1	5.1	13	344	137	42	15	12
15....	7.9	9.3	7.1	5.1	5.1	5.1	24	332	133	40	14	11
16....	7.9	9.3	7.1	5.1	5.1	5.1	5.1	402	173	34	17	11
17....	13	8.2	7.1	5.1	5.1	5.1	69	447	251	33	15	10
18....	12	8.2	7.1	5.1	5.1	5.1	5.6	512	192	28	17	10
19....	12	8.2	7.1	5.1	5.1	5.1	48	495	120	27	14	10
20....	13	8.2	7.1	5.1	5.1	5.1	5.3	329	124	26	14	10
21....	13	8.2	7.1	5.1	5.1	5.1	5.8	376	164	24	12	9.0
22....	12	8.2	7.1	5.1	5.1	5.1	7.3	300	118	23	12	9.0
23....	12	8.2	7.1	5.1	5.1	5.1	69	261	103	22	12	10
24....	10	8.2	7.1	5.1	5.1	5.1	5.3	240	98	22	11	9.0
25....	10	8.2	7.1	5.1	5.1	5.1	63	156	94	22	10	9.0
26....	10	8.2	7.1	5.1	5.1	5.1	84	133	94	24	10	9.0
27....	9.3	8.2	6.1	5.1	5.1	5.1	105	134	76	20	12	7.9
28....	9.3	8.2	6.1	5.1	5.1	5.1	72	205	76	31	19	9.8
29....	9.3	8.2	6.1	5.1	....	5.1	59	176	77	31	25	20
30....	10	8.2	6.1	5.1	....	5.1	53	170	58	31	31	39
31....	10	....	6.1	5.1	....	5.1	....	165	....	28	39	....
Total	335.5	261.8	219.5	162.1	142.8	158.1	1087.9	7689	420.3	1244	566	473.7
Mean.	10.8	8.73	7.08	5.23	5.10	5.10	36.3	248	140	40.1	18.3	15.8
Max.	15	9.3	8.2	6.1	5.1	5.1	105	512	251	100	39	39
Min.	7.9	8.2	6.1	5.1	5.1	5.1	5.1	64	58	20	10	7.9
Acre-ft.	665	519	435	322	283	314	2160	15250	8340	2470	1120	940

Total run-off for water year 1936-37=32,820 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cascade Creek Near Tacoma, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	22	11	4.2	4.2	4.2	4.4	5.1	116	339	242	44	60
2....	17	12	4.8	4.2	4.2	4.2	5.5	83	287	179	42	56
3....	15	11	5.0	4.2	4.2	4.2	5.5	60	516	163	42	53
4....	14	12	4.2	4.2	4.2	4.2	5.9	53	461	140	50	50
5....	12	11	4.4	4.2	4.2	3.7	5.9	42	461	99	42	39
6....	12	11	5.0	4.2	4.2	3.3	5.5	39	364	138	44	36
7....	13	11	4.8	4.2	4.2	4.2	5.5	36	292	145	36	39
8....	12	11	4.2	4.2	4.2	3.7	5.5	31	247	156	33	36
9....	13	9.7	4.4	4.2	3.7	3.7	6.3	26	247	137	39	33
10....	12	9.9	4.4	4.2	3.7	3.7	7.5	26	239	137	36	33
11....	11	6.8	5.0	4.2	3.7	3.7	9.3	28	216	96	33	80
12....	11	8.7	5.0	4.2	4.0	3.7	10	37	313	91	39	115
13....	11	9.0	4.4	4.2	4.2	4.0	16	65	352	74	60	95
14....	11	8.8	4.2	4.2	4.2	4.2	13	129	248	87	42	72
15....	18	7.2	4.4	4.2	4.2	4.4	12	172	257	81	33	53
16....	17	5.7	4.4	4.2	4.2	4.2	12	157	270	44	31	50
17....	16	6.3	4.4	4.2	4.2	4.4	26	141	285	79	26	39
18....	16	6.8	4.4	4.2	4.2	4.2	24	124	257	74	26	42
19....	12	8.0	4.2	4.2	4.2	4.7	16	99	223	66	22	39
20....	12	8.0	4.2	4.2	4.0	5.5	44	83	250	66	22	39
21....	11	7.1	4.2	4.2	4.2	6.7	54	83	332	59	22	20
22....	12	7.7	4.2	4.2	4.2	6.7	46	103	288	51	22	31
23....	13	6.6	3.3	4.2	4.2	7.1	121	124	268	48	22	28
24....	13	7.5	4.4	4.2	4.0	8.9	90	153	251	56	20	26
25....	13	5.8	4.2	4.2	4.2	9.8	98	247	236	60	20	24
26....	13	6.1	4.2	4.2	4.0	11	90	300	266	50	20	24
27....	13	7.5	4.4	4.2	4.0	9.3	76	339	224	59	20	22
28....	13	5.3	3.3	4.2	4.2	8.4	83	377	205	62	20	22
29....	14	5.7	3.3	4.2	...	5.5	137	395	354	66	22	20
30....	14	5.9	2.7	4.2	...	5.5	116	364	330	56	22	20
31....	13	...	3.3	4.2	...	5.5	...	377	...	53	24	...
Total	419	250.1	131.5	130.2	115.1	166.7	1151.5	4409	8878	2914	976	1296
Mean.	13.5	8.34	4.24	4.2	4.11	5.38	38.4	142	296	94.0	31.5	43.2
Max.	22	12	5.0	...	4.2	11	137	395	516	242	60	115
Min.	11	5.3	2.7	...	3.7	3.3	5.1	26	205	44	20	20
Acre-ft.	831	496	261	258	228	331	2280	8750	17610	5780	1940	2570

Total run-off for water year 1937-38=41,340 acre-feet.

Discharge of Lightner Creek Near Durango, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	4.4	9.8	8.2	...	...	2.8	112	72	23	12	6.9	4.2
2....	4.4	5.3	6.6	...	...	2.8	148	85	20	11	5.9	4.2
3....	3.7	4.4	7.2	...	...	2.8	139	100	18	11	5.9	4.2
4....	3.2	3.7	7.2	...	...	3.0	130	115	17	13	5.9	4.2
5....	3.2	3.2	7.2	...	...	3.0	168	130	16	36	5.3	4.2
6....	3.9	3.7	10	...	...	3.0	165	100	14	30	4.8	3.5
7....	3.9	3.7	8.2	...	...	3.2	199	100	14	30	4.6	3.7
8....	3.2	3.0	8.2	...	...	3.4	291	115	14	30	4.4	3.0
9....	3.2	2.6	8.2	...	...	3.7	374	115	12	25	3.9	2.6
10....	3.2	2.6	10	...	...	4.8	441	115	11	25	3.7	2.6
11....	3.2	3.0	6.9	...	...	11	418	115	11	55	3.0	2.2
12....	3.2	3.2	8.5	...	...	14	418	100	11	22	3.0	2.2
13....	4.4	3.2	6.3	...	...	11	418	100	9.8	18	3.0	1.8
14....	3.2	3.7	8.5	...	...	14	374	100	8.5	15	3.0	1.2
15....	3.2	3.7	6.3	...	...	23	313	115	8.5	13	3.0	1.2
16....	3.2	3.7	6.3	...	...	23	274	106	8.5	13	3.0	1.2
17....	3.2	3.7	6.3	...	...	60	257	100	8.5	11	3.0	1.2
18....	3.2	3.7	6.0	...	...	91	236	70	8.5	10	4.2	1.2
19....	3.2	4.2	6.0	...	...	38	219	70	8.5	8.2	3.7	1.2
20....	5.1	4.8	6.0	...	...	31	199	59	7.9	6.9	3.5	1.2
21....	5.6	4.8	5.0	...	...	39	196	51	7.5	5.6	3.0	1.2
22....	4.6	4.8	5.0	...	...	70	209	49	7.5	4.6	3.0	1.2
23....	4.6	4.8	5.0	...	...	67	172	46	7.5	4.6	3.0	2.2
24....	4.6	5.6	5.0	...	...	49	151	41	6.9	4.8	3.0	2.2
25....	4.6	5.6	5.0	...	...	34	148	38	6.9	4.4	3.0	2.2
26....	4.6	5.6	4.0	...	...	27	145	33	57	3.9	3.0	2.2
27....	4.6	7.5	4.0	...	...	31	151	30	34	3.9	3.0	2.6
28....	4.6	9.8	4.0	...	...	40	124	30	16	32	3.0	6.3
29....	3.9	10	4.0	...	...	40	106	32	18	32	3.0	9.8
30....	12	9.0	3.0	...	...	42	75	29	13	13	3.0	9.8
31....	5.3	...	3.0	...	...	78	...	...	...	8.5	4.2	...
Total	130.4	146.4	195.1	62	84	865.5	6770	2400	424.0	484.3	117.9	83.9
Mean.	4.21	4.88	6.29	2.0	3.0	27.9	226	77.4	14.1	15.6	3.8	2.8
Max.	12	10	10	...	...	91	441	130	57	55	6.9	9.8
Min.	3.2	2.6	3.0	...	...	3.8	75	29	6.9	3.9	3.0	1.2
Acre-ft.	259	290	387	123	167	1720	13430	4760	841	961	234	166

Total run-off for water year 1936-37=23,340 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Lightner Creek Near Durango, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	4.2	4.4	....	....	....	4.4	40	179	72	28	4.6	5.3
2....	3.9	3.9	....	....	....	5.6	40	142	72	24	4.2	5.1
3....	3.7	3.9	....	....	....	25	62	109	72	19	4.2	4.6
4....	3.5	3.7	....	....	....	23	118	91	65	16	4.2	4.6
5....	3.0	3.5	....	....	....	13	142	88	56	13	3.9	13
6....	3.0	3.2	....	....	....	12	118	78	51	9.8	3.7	15
7....	3.0	3.0	....	....	....	9.0	94	70	46	7.2	3.7	8.2
8....	3.0	2.8	....	....	....	7.5	97	60	41	7.2	3.5	6.6
9....	3.0	2.8	....	....	....	6.9	139	56	34	7.2	4.2	6.6
10....	3.0	3.2	....	....	....	6.9	172	57	34	6.6	3.9	13
11....	3.2	3.2	....	....	....	11	202	60	30	5.6	3.9	10
12....	3.5	2.8	....	....	....	16	216	70	28	4.8	3.9	8.2
13....	3.7	2.8	....	....	....	27	216	80	27	6.6	4.6	8.2
14....	3.9	2.8	....	....	....	24	175	121	25	5.6	3.5	8.2
15....	4.2	2.6	....	....	....	20	133	124	25	4.4	3.5	8.2
16....	5.1	2.8	....	....	....	34	139	139	25	3.7	3.5	8.2
17....	4.8	3.2	....	....	....	34	182	109	24	3.7	3.9	7.5
18....	4.2	3.0	....	....	....	27	250	88	22	3.7	3.5	7.2
19....	4.2	3.2	....	....	....	36	313	75	21	3.9	3.5	5.9
20....	4.4	3.0	....	....	....	54	309	62	30	3.9	3.5	5.6
21....	4.6	3.0	....	....	....	40	291	59	30	4.2	3.5	5.6
22....	4.6	2.8	....	....	....	34	295	65	29	3.9	3.5	5.6
23....	4.6	2.6	....	....	....	54	313	70	25	3.7	3.5	5.6
24....	4.4	3.0	....	....	....	118	306	78	24	3.2	3.5	5.6
25....	4.2	3.0	....	....	....	148	284	83	22	3.2	3.5	5.1
26....	4.4	3.2	....	....	....	158	250	91	18	3.5	3.5	5.1
27....	4.6	3.0	....	....	....	121	199	91	17	4.2	3.5	5.1
28....	4.6	3.0	....	....	....	94	199	100	19	6.9	3.5	5.1
29....	4.8	3.0	....	....	....	83	216	100	48	6.6	3.5	5.1
30....	4.6	3.0	....	....	....	49	216	83	41	5.3	3.5	5.1
31....	4.6	....	....	....	....	44	....	78	....	4.6	3.5	....
Total	124.5	93.4	93	93	84	1339.3	5726	2756	1073	233.2	115.9	212.2
Mean.	4.02	3.11	3.0	3.0	3.0	43.2	191	88.9	35.8	7.52	3.74	7.07
Max..	5.1	4.4	....	....	....	158	313	179	72	28	4.6	15
Min..	3.0	2.6	....	....	....	4.4	40	56	17	3.2	3.5	4.6
Acre-ft.	247	185	184	184	167	2660	11360	5470	2130	463	230	421

Total run-off for water year 1937-38=23,700 acre-feet.

Discharge of Florida River Near Durango, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	47	42	24	....	....	15	60	281	350	126	60	86
2....	46	37	21	....	....	15	83	338	385	128	47	72
3....	45	30	....	....	....	15	83	413	385	117	41	64
4....	41	47	....	....	....	15	72	496	365	99	39	59
5....	39	39	....	....	....	15	79	496	338	104	37	50
6....	41	35	....	....	....	15	88	417	306	92	46	46
7....	42	34	....	....	....	15	84	397	316	92	39	43
8....	35	31	....	....	....	15	106	471	361	84	32	41
9....	35	31	....	....	....	15	135	615	342	77	29	36
10....	35	32	....	....	....	15	152	601	306	74	26	32
11....	31	32	....	....	....	15	185	601	350	117	23	30
12....	30	27	....	....	....	15	250	642	354	163	24	27
13....	29	28	....	....	....	15	310	702	334	147	20	23
14....	28	31	....	....	....	15	370	706	310	119	22	20
15....	26	26	....	....	....	15	438	660	268	97	27	20
16....	26	26	....	....	....	15	417	601	274	86	39	18
17....	29	29	....	....	....	15	377	697	292	76	33	18
18....	28	31	....	....	....	15	361	633	282	67	32	16
19....	25	31	....	....	....	15	373	552	268	59	27	15
20....	36	29	....	....	....	15	377	539	246	53	21	14
21....	37	31	....	....	....	31	405	588	243	47	20	13
22....	33	29	....	....	....	41	425	606	246	47	25	15
23....	32	26	....	....	....	53	389	583	212	41	26	15
24....	30	29	....	....	....	52	338	509	179	37	20	15
25....	29	32	....	....	....	46	357	405	160	39	20	13
26....	29	29	....	....	....	43	381	342	155	35	22	13
27....	26	31	....	....	....	43	417	334	193	36	30	12
28....	27	29	....	....	....	37	361	397	168	76	46	13
29....	26	21	....	....	....	33	299	479	158	112	39	21
30....	39	22	....	....	....	37	268	417	135	97	53	56
31....	41	....	....	....	....	42	....	389	....	72	97	....
Total	1043	927	465	310	224	758	8040	15907	8281	2616	1062	916
Mean.	33.6	30.9	15.0	10.0	8.0	24.5	268	513	276	84.4	34.3	30.5
Max..	47	47	....	....	....	....	438	706	385	163	97	86
Min..	25	21	....	....	....	....	60	281	135	35	20	12
Acre-ft.	2070	1840	922	615	444	1500	15950	31550	16430	5190	2110	1820

Total run-off for water year 1936-37=80,440 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Florida River Near Durango, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	31	23	.....	.....	.....	8	31	448	743	415	46	88
2.....	30	22	.....	.....	.....	10	28	338	663	349	37	253
3.....	30	20	.....	.....	.....	15	36	288	820	294	37	222
4.....	31	18	.....	.....	.....	40	53	243	840	260	33	229
5.....	28	17	.....	.....	.....	25	77	209	781	222	41	190
6.....	26	16	.....	.....	.....	15	75	193	743	196	36	162
7.....	25	20	.....	.....	.....	20	65	174	623	168	32	196
8.....	26	17	.....	.....	.....	15	63	151	557	154	31	190
9.....	26	16	.....	.....	.....	15	77	140	513	137	31	148
10.....	20	17	.....	*4.2	.....	13	102	137	526	123	31	162
11.....	18	16	.....	.....	.....	14	127	135	508	105	33	452
12.....	18	14	.....	.....	.....	18	159	143	579	118	47	353
13.....	18	14	.....	.....	.....	20	162	177	623	145	94	253
14.....	18	14	.....	.....	.....	18	159	309	535	157	90	187
15.....	27	15	.....	.....	.....	17	125	517	579	127	63	157
16.....	30	13	.....	.....	.....	21	130	543	579	109	51	135
17.....	25	14	.....	.....	.....	24	168	436	587	94	44	123
18.....	24	13	.....	.....	.....	22	246	349	565	84	39	100
19.....	22	12	.....	.....	.....	26	320	309	482	81	32	90
20.....	24	14	*9.6	.....	.....	33	342	266	474	81	29	81
21.....	25	12	.....	.....	.....	39	361	270	681	77	26	73
22.....	24	10	.....	.....	.....	33	384	323	710	71	23	67
23.....	26	10	.....	.....	.....	37	436	349	636	81	19	62
24.....	28	9.0	.....	.....	.....	46	491	411	526	68	21	57
25.....	26	9.0	.....	.....	.....	62	504	504	478	62	20	53
26.....	27	9.0	.....	.....	.....	68	452	681	436	57	18	44
27.....	28	9.0	.....	.....	.....	54	364	781	411	65	18	42
28.....	27	9.0	.....	.....	.....	49	400	875	392	92	17	39
29.....	27	9.0	.....	.....	.....	44	474	955	700	71	21	39
30.....	27	9.0	.....	.....	.....	38	513	890	561	63	30	37
31.....	25	.....	.....	.....	.....	30	.....	825	.....	54	39	.....
Total	787	420	279	217	252	889	6924	12369	17851	4180	1129	4284
Mean.	25.4	14.0	9.0	7.0	9.0	28.7	231	399	595	135	36.4	143
Max.	31	23	.....	.....	.....	62	513	955	840	415	94	452
Min.	18	9	.....	.....	.....	8	28	135	392	54	17	37
Acre-ft.	1560	833	553	430	500	1760	13730	24530	35410	8290	2240	8500

Total run-off for water year 1937-38=98,340 acre-feet.

*Discharge measurement.

Discharge of La Plata River at Hesperus, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	11	9.0	.....	.....	.....	.....	18	129	128	26	29	13
2.....	14	8.4	.....	.....	.....	.....	18	171	133	35	25	12
3.....	18	6.0	.....	.....	.....	*6.6	18	232	133	37	23	10
4.....	14	6.0	*8.0	.....	.....	.....	19	216	114	42	18	10
5.....	15	6.6	.....	.....	.....	.....	21	262	98	78	19	9.5
6.....	19	6.6	.....	.....	.....	.....	22	216	81	47	26	9.5
7.....	18	5.6	.....	.....	.....	.....	25	216	81	45	24	9.2
8.....	16	5.6	.....	.....	.....	.....	26	335	91	47	22	8.9
9.....	18	6.0	.....	.....	.....	.....	37	358	81	52	18	7.7
10.....	16	5.6	*10	.....	.....	.....	51	340	71	52	16	7.1
11.....	11	5.6	.....	.....	.....	.....	108	363	91	98	14	6.8
12.....	7.8	5.6	.....	.....	.....	.....	153	406	95	114	11	6.5
13.....	10	6.6	.....	.....	.....	.....	201	406	95	102	10	6.2
14.....	14	7.8	.....	.....	.....	.....	212	358	78	85	10	5.6
15.....	15	8.4	.....	.....	.....	.....	224	377	54	64	10	5.9
16.....	14	9.6	.....	.....	*7.4	.....	284	441	66	52	12	5.6
17.....	14	11	.....	.....	.....	.....	212	406	88	54	14	5.3
18.....	12	14	.....	.....	.....	.....	237	411	85	49	12	5.6
19.....	13	16	.....	.....	.....	.....	275	356	74	40	12	5.6
20.....	13	18	.....	.....	.....	.....	249	225	95	29	9.2	4.6
21.....	13	18	.....	.....	.....	.....	266	219	85	19	7.4	5.3
22.....	12	18	*9.1	.....	.....	.....	245	219	71	14	11	5.6
23.....	11	18	.....	.....	.....	.....	253	225	74	11	10	4.8
24.....	11	15	.....	.....	.....	.....	197	219	66	13	9.8	5.9
25.....	11	13	.....	.....	.....	.....	201	163	61	17	10	5.6
26.....	10	9.0	.....	.....	.....	.....	258	128	74	22	11	5.6
27.....	9.6	7.2	.....	.....	.....	.....	216	152	64	20	14	5.0
28.....	9.6	7.0	*8.6	.....	.....	.....	174	163	49	25	14	2.7
29.....	9.6	7.0	.....	.....	.....	.....	143	179	40	38	14	7.1
30.....	9.6	7.0	.....	.....	.....	.....	129	184	23	42	16	11
31.....	9.0	.....	.....	.....	.....	.....	.....	147	.....	33	16	.....
Total	398.2	287.2	279	266.6	207.2	248	4492	8222	2439	1402	467.4	213.7
Mean.	12.8	9.57	9.0	8.6	7.4	8.0	150	265	81.3	45.2	15.1	7.12
Max.	19	18	.....	.....	.....	.....	284	441	133	114	29	13
Min.	7.8	5.6	.....	.....	.....	.....	18	128	23	11	7.4	2.7
Acre-ft.	790	570	553	529	411	492	8910	16310	4840	2780	927	424

Total run-off for water year 1936-37=37,540 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Plata River at Hesperus, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	8.6	4.4	2.7	2.0	3.3	4.0	9.2	272	341	104	20	12
2....	9.5	4.0	2.8	2.0	3.3	4.4	9.8	177	304	85	18	14
3....	12	4.0	2.9	2.0	3.2	4.6	10	130	410	78	18	24
4....	13	3.6	3.5	2.0	3.2	6.0	10	100	328	72	16	30
5....	12	3.6	3.5	2.0	3.2	4.9	10	78	264	65	15	29
6....	11	3.2	4.0	2.0	3.2	4.6	10	75	229	53	17	28
7....	10	3.2	4.1	2.0	3.2	4.9	10	67	202	45	18	35
8....	9.8	3.4	4.1	2.0	3.2	4.7	11	62	181	42	17	37
9....	9.5	3.4	4.1	2.0	3.2	4.5	14	59	170	37	17	30
10....	9.2	3.2	4.1	*1.9	3.2	4.3	23	59	150	35	15	32
11....	8.6	3.2	4.0	2.0	*3.2	4.5	54	64	104	34	16	67
12....	8.0	3.0	*4.0	2.2	6.0	4.9	128	80	107	38	15	69
13....	8.0	2.9	4.0	2.2	8.0	5.2	128	124	123	47	16	55
14....	7.7	2.9	4.0	2.4	7.0	5.4	105	286	80	53	21	44
15....	9.5	2.9	3.9	2.5	5.0	5.4	85	362	80	39	22	37
16....	10	2.8	3.5	2.6	4.7	5.4	88	340	99	38	22	32
17....	9.5	2.8	3.0	2.7	4.5	5.6	147	250	93	38	19	30
18....	9.2	2.9	2.5	2.8	4.2	5.8	277	170	87	37	17	26
19....	7.7	2.9	2.4	2.9	3.9	6.0	418	138	69	32	16	23
20....	7.1	2.9	2.1	3.0	3.7	5.8	390	111	61	32	15	22
21....	6.8	2.9	2.0	3.1	3.7	6.0	323	114	87	34	13	21
22....	6.5	2.9	2.0	3.2	3.8	6.2	350	148	104	35	12	22
23....	5.9	3.0	2.0	3.4	3.8	6.2	356	184	93	35	11	21
24....	5.9	2.9	2.0	*3.5	3.9	6.2	491	264	90	28	12	20
25....	6.2	2.9	2.0	3.5	*4.0	*6.5	471	367	85	24	10	19
26....	4.8	2.8	2.0	3.5	4.0	6.8	312	405	80	22	9.5	18
27....	4.8	2.7	2.0	3.4	4.0	6.8	206	458	85	24	8.5	17
28....	4.8	2.7	2.0	3.4	4.0	6.8	259	483	96	23	8.0	16
29....	4.8	2.7	2.0	3.4	....	7.4	308	388	276	21	8.0	14
30....	4.8	2.7	2.0	3.4	....	8.0	317	554	166	20	8.5	14
31....	4.8	....	2.0	3.3	....	8.0	....	360	....	20	8.0	....
Total	250	93.4	91.2	82.3	113.6	175.8	5330	6729	4644	1290	458.5	858
Mean.	8.06	3.11	2.94	2.65	4.06	5.67	178	217	155	41.6	14.8	28.6
Max..	13	4.4	4.1	3.5	8.0	8.0	491	554	410	104	23	69
Min..	4.8	2.7	2.0	1.9	3.2	4.0	9.2	59	61	20	8.0	12
Acre-ft.	496	185	181	163	225	349	10570	13350	9210	2560	909	1700

Total run-off for water year 1937-38=39,900 acre-feet.

*Discharge measurement.

Discharge of La Plata River at Colorado-New Mexico Line for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	12	26	19	....	14	11	83	213	60	0.5	18	1.6
2....	11	30	17	....	14	21	122	235	41	0.7	17	2.4
3....	11	16	15	....	14	23	137	293	107	4.0	16	2.6
4....	9.1	13	19	....	14	20	110	325	95	0.8	14	2.2
5....	7.9	13	19	....	14	20	104	335	64	1.2	15	2.0
6....	7.6	13	13	....	15	24	154	278	58	7.9	11	1.6
7....	10	13	11	....	15	27	128	206	39	8.5	9.1	1.6
8....	9.4	13	14	....	15	29	158	210	5.0	36	8.5	4.6
9....	7.0	13	10	....	15	35	219	245	4.0	56	7.6	5.5
10....	7.0	14	9.4	....	15	43	315	254	2.0	69	6.1	3.6
11....	7.6	15	9.4	....	16	41	429	262	1.0	121	4.9	3.6
12....	7.9	14	9.4	....	16	40	544	226	1.0	89	3.0	3.0
13....	8.5	16	9.7	....	16	63	574	210	1.0	50	3.2	2.6
14....	8.5	16	11	....	16	59	544	226	1.0	50	3.6	2.0
15....	9.4	17	14	....	16	58	673	245	1.0	41	3.4	1.5
16....	9.7	18	13	....	16	64	700	233	1.0	48	5.5	0.8
17....	9.7	21	14	....	16	88	446	233	1.0	49	3.6	0.2
18....	10	23	12	....	16	82	372	215	54	47	3.0	0.1
19....	11	24	11	....	16	63	415	148	73	29	2.6	0.2
20....	25	25	12	....	16	48	401	106	80	4.3	2.8	0
21....	25	22	13	....	17	59	441	82	82	1.0	2.0	1.0
22....	25	21	12	....	17	72	490	76	80	0	1.5	1.4
23....	16	18	12	....	17	90	458	68	82	0.4	1.2	2.0
24....	16	18	12	....	17	63	372	59	69	0.5	1.4	2.2
25....	15	18	14	....	17	77	350	29	74	7.0	1.5	2.2
26....	14	18	15	....	18	65	388	19	98	9.4	1.8	1.6
27....	14	19	12	....	17	62	438	64	119	4.0	2.0	1.5
28....	14	17	14	*12	11	60	380	101	117	33	1.7	0.8
29....	14	22	15	....	....	67	298	78	8.8	286	1.7	1.9
30....	30	19	14	....	....	56	242	114	2.4	70	1.8	70
31....	28	....	14	....	....	64	....	72	....	24	1.8	....
Total	406.3	545	408.9	403	436	1594	10485	5460	1361.2	1148.2	176.3	157.8
Mean.	13.1	18.2	13.2	13	15.6	51.4	350	176	45.4	37.0	5.69	5.26
Max..	30	30	19	....	18	90	700	335	119	286	18	70
Min..	7	13	9.4	....	11	11	83	19	1.0	0	1.2	0
Acre-ft.	806	1080	811	799	865	3160	20800	10830	2700	2280	350	313

Total run-off for water year 1936-37=44,790 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Plata River at Colorado-New Mexico Line for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	16.0	3.8	8.2	13	12	67	32	228	55	63	0.2	10
2....	9.6	3.5	12	13	12	43	32	171	42	72	0.2	5
3....	7.9	3.8	12	13	12	86	32	119	81	89	0.2	109
4....	7.2	3.8	11	15	12	103	59	86	84	78	0.2	23
5....	5.9	3.8	10	22	14	47	86	59	73	67	0.2	8.2
6....	5.3	3.4	9.3	28	8.6	27	83	47	62	21	1.2	8.6
7....	5.3	5.0	9.3	30	12	24	63	46	54	2.8	2.4	2.6
8....	5.3	4.7	10	30	12	26	55	39	54	0.5	3.8	9.3
9....	5.0	4.4	10	30	12	23	52	34	76	0.4	5.0	7.2
10....	4.7	4.4	10	*29	32	20	78	28	62	0.2	5.3	40
11....	5.0	4.1	11	*20	47	20	98	24	39	0.2	4.7	32
12....	5.3	4.1	13	19	66	25	141	17	54	0.2	5.9	9.6
13....	5.3	4.4	13	19	23	31	186	35	60	0.2	5.3	7.6
14....	6.8	2.9	12	18	19	39	186	92	35	1.0	5.0	6.5
15....	12.0	2.9	12	18	19	26	139	155	18	0.8	4.7	6.8
16....	11.0	2.8	12	18	19	27	137	155	4.4	0.9	5.0	7.6
17....	7.5	2.9	13	19	17	37	192	86	1.1	15	4.7	5.0
18....	6.8	3.0	12	20	12	32	254	45	0.2	27	3.5	4.1
19....	7.2	3.2	7.0	22	14	27	366	29	0.6	26	3.4	5.0
20....	7.5	3.4	3.5	25	14	36	444	27	0.9	26	3.8	5.6
21....	5.9	3.8	*3.0	24	12	54	417	27	0.8	28	3.4	5.9
22....	4.4	3.0	3.0	18	11	34	391	30	6.5	32	3.2	3.8
23....	4.4	3.4	3.0	14	11	32	404	53	12	33	2.3	2.4
24....	4.4	7.2	4.0	12	12	41	444	60	7.2	28	2.6	2.6
25....	4.1	9.6	6.0	12	12	58	457	52	7.9	24	2.6	2.8
26....	4.4	8.6	8.0	12	12	63	404	72	63	21	3.0	2.8
27....	4.7	6.8	9.0	12	13	48	254	87	67	8.2	4.1	2.6
28....	3.5	6.8	10	12	39	49	212	104	96	2.8	3.2	2.6
29....	3.4	8.6	11	12	...	45	266	165	155	0.2	2.9	2.8
30....	3.5	9.0	12	10	...	41	232	106	116	0.2	3.8	1.9
31....	3.8	...	13	9.6	...	29	...	75	...	0.2	3.8	...
Total	193.1	141.1	292.3	568.6	510.6	1260	6196	2353	1387.6	668.8	99.6	366.3
Mean.	6.23	4.70	9.43	18.3	18.2	40.6	207	75.9	46.3	21.6	3.21	12.2
Max..	16	9.6	13	30	66	103	457	228	155	89	5.9	109
Min..	3.4	2.8	3	9.6	8.6	20	32	17	0.2	0.2	0.2	1.9
Acre-ft.	383	280	580	1130	1010	2500	12290	4670	2750	1330	198	727

Total run-off for water year 1937-38=27,850 acre-feet.

*Discharge measurement.

Discharge of Cherry Creek at Mouth Near Red Mesa, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	2.3	...	...	...	...	8	25	82	12	3.6	7.7	0.5
2....	2.3	...	...	...	...	8	62	82	6.7	12	7.4	0.5
3....	1.4	...	...	...	...	8	77	77	6.7	11	7.4	0.6
4....	1.4	...	*8.2	...	...	8	77	72	6.7	11	4.7	0.7
5....	1.4	...	...	...	...	8	77	61	9.3	10	3.2	0.8
6....	1.4	...	...	...	...	8	77	64	10	16	2.6	1.0
7....	1.4	...	...	...	...	8	45	61	6.7	12	4.7	2.6
8....	1.4	...	...	...	...	8	67	61	5.4	19	4.7	2.2
9....	1.4	...	...	...	...	8	127	63	4.2	14	3.2	2.0
10....	3.3	...	...	...	...	8	176	65	3.2	16	2.8	1.8
11....	3.3	...	...	...	...	8	248	77	2.2	33	2.2	1.7
12....	3.3	...	...	...	...	8	262	75	2.6	55	1.8	1.5
13....	3.3	...	...	...	...	8	292	68	2.6	27	1.6	1.5
14....	3.3	...	...	...	...	8	325	61	2.2	18	1.6	1.2
15....	3.3	...	...	...	...	8	395	56	3.2	15	1.6	1.2
16....	2.3	...	...	...	...	8	410	51	3.2	12	1.6	1.1
17....	2.3	...	...	...	...	8	199	40	3.2	9.0	1.2	1.1
18....	2.2	...	...	...	...	8	158	24	3.2	7.7	1.2	1.1
19....	2.0	...	...	...	...	8	174	24	6.7	6.7	1.0	1.0
20....	4.0	...	...	...	...	8	161	19	6.2	5.4	1.0	1.0
21....	4.0	...	...	...	...	8	163	16	5.4	4.2	1.0	1.0
22....	4.0	...	...	...	...	8	166	12	5.4	3.2	1.0	1.0
23....	4.0	...	...	...	...	8	136	12	5.4	3.6	1.0	1.0
24....	4.0	...	...	...	...	23	107	8.4	5.4	3.2	0.5	0.8
25....	4.0	...	...	...	...	23	97	8.4	5.4	2.8	0.5	0.7
26....	4.0	...	...	...	...	15	105	5.4	6.2	2.4	0.5	0.8
27....	4.0	...	...	...	...	13	122	4.2	7.4	2.0	0.3	0.8
28....	4.0	...	...	...	...	14	102	4.2	7.7	2.2	0.3	0.6
29....	4.0	...	...	...	...	13	80	4.2	3.8	18	0.5	2.2
30....	5.0	...	...	...	...	11	72	2.2	2.6	2.2	0.7	10
31....	5.0	...	...	...	...	15	...	20	...	9.0	0.7	...
Total	93.0	240	186	93	84	311	4584	1299.8	160.9	386.0	70.2	44.0
Mean.	3.0	8.0	6.0	3.0	3.0	10	153	41.9	5.36	12.5	2.26	1.47
Max..	5	...	...	...	...	23	410	82	12	55	7.7	10
Min..	1.4	...	...	...	...	...	25	4.2	2.2	2.0	0.3	0.5
Acre-ft.	184	476	369	184	167	615	9090	2580	319	766	139	87

Total run-off for water year 1936-37=14,980 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cherry Creek Near Red Mesa, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	6.6	2.9	....	....	1.8	14	14	105	4.5	19	1.0	1.2
2....	4.8	2.9	....	....	1.8	9.0	13	92	2.2	14	1.0	1.0
3....	3.5	2.9	....	....	1.8	17	14	72	2.0	12	1.0	45
4....	2.0	2.6	....	....	1.8	20	34	54	1.6	10	1.0	3.5
5....	1.5	2.4	....	....	1.8	9.0	68	46	1.6	9.0	1.0	3.1
6....	1.5	2.0	....	....	1.8	8.0	58	38	1.6	8.3	0	2.2
7....	1.5	2.0	....	....	1.8	7.0	42	38	1.6	5.3	0	6.6
8....	1.2	2.0	....	....	1.8	7.0	32	38	2.0	4.0	0	3.1
9....	0.9	2.0	....	....	1.8	6.6	28	34	3.1	4.0	0	5.3
10....	0.8	2.0	....	....	1.8	7.6	50	30	3.6	3.5	0	1.2
11....	0.9	2.0	....	....	1.8	7.6	68	27	3.5	3.1	0	8.3
12....	0.9	2.0	....	....	1.8	8.3	84	27	2.7	2.6	0	5.3
13....	0.9	2.0	....	....	1.8	13	85	24	3.1	2.2	0	4.0
14....	0.9	2.0	....	....	1.8	27	82	32	2.7	2.0	0	3.1
15....	1.2	2.0	....	....	1.8	13	65	44	2.6	1.6	0	2.2
16....	2.4	1.4	....	....	1.8	13	78	52	2.6	1.6	0	2.2
17....	1.8	1.4	....	....	1.8	22	98	48	2.0	1.8	0	2.7
18....	1.5	1.4	....	....	1.8	20	108	48	2.0	2.2	0	2.6
19....	1.5	1.4	....	....	1.8	16	125	46	2.0	2.2	0	2.2
20....	1.5	1.4	....	....	1.8	26	154	34	2.2	2.2	0	2.2
21....	1.5	1.4	....	....	1.8	42	144	24	3.1	2.2	0	2.2
22....	1.5	1.4	....	....	1.8	23	136	20	19	2.2	0	2.2
23....	1.5	1.4	....	....	1.8	18	134	19	22	3.1	0	2.2
24....	1.5	1.4	....	....	1.8	24	148	18	19	3.1	0	2.2
25....	1.5	1.4	....	....	3.2	36	142	16	15	3.1	0	2.2
26....	1.5	1.4	....	....	2.7	42	136	15	14	2.6	0	2.2
27....	1.5	1.4	....	....	3.1	32	114	14	16	1.5	0	2.2
28....	1.7	1.4	....	....	3.1	28	95	13	16	1.2	0	2.2
29....	2.9	1.4	....	....	....	23	98	11	25	1.2	0	2.2
30....	2.9	1.4	....	....	....	19	94	10	30	1.2	0	2.2
31....	2.9	....	....	....	....	13	....	7.3	....	1.2	....	....
Total	58.7	54.7	46.5	46.5	55.3	571.1	2541	1096.3	228.3	133.2	6.2	140.7
Mean.	1.89	1.82	1.5	1.5	1.98	18.4	84.7	35.4	7.61	4.30	0.20	4.69
Max..	6.6	2.9	....	....	3.2	42	154	105	30	19	1.2	45
Min...	0.8	1.4	....	....	1.8	6.6	13	7.3	1.6	1.2	0	1.0
Acre-ft.	116	108	92	92	110	1130	5040	2170	453	264	12	279

Total run-off for water year 1937-38=9,870 acre-feet.

Discharge of East Mancos River Near Mancos, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	3.2	11	84	70	14	0.8	4.4
2....	5.5	12	55	59	11	0.7	8.9
3....	8.0	13	37	65	8.9	0.5	8.0
4....	7.6	14	25	65	7.4	0.5	5.9
5....	6.8	14	22	53	6.2	0.8	4.2
6....	5.1	15	19	45	5.9	1.0	6.8
7....	3.9	15	15	42	5.3	1.1	7.1
8....	3.2	14	11	45	4.2	1.1	6.8
9....	2.9	18	10	43	2.8	1.1	5.6
10....	2.2	24	10	41	2.0	0.7	5.6
11....	1.9	32	16	38	2.6	0.8	11
12....	2.2	44	22	36	3.0	3.2	13
13....	2.5	45	56	32	3.9	4.8	8.9
14....	2.2	41	116	26	4.6	3.7	7.1
15....	2.5	32	120	28	3.7	2.4	6.5
16....	3.2	28	108	25	3.7	2.0	5.6
17....	3.6	36	66	24	3.7	2.0	4.6
18....	4.3	68	54	20	2.8	1.6	3.7
19....	4.3	85	54	16	2.8	1.3	3.2
20....	5.1	90	47	13	3.0	1.0	2.8
21....	7.6	87	49	16	2.7	0.8	2.7
22....	8.5	100	54	16	3.5	0.7	2.4
23....	9.5	101	54	12	3.7	0.8	2.2
24....	9.5	112	60	11	2.7	1.0	2.1
25....	13	118	81	9.4	2.4	0.9	2.1
26....	16	96	97	8.9	2.4	1.0	2.0
27....	14	60	108	8.3	2.7	0.8	1.8
28....	13	86	88	8.9	2.2	1.0	1.6
29....	12	93	74	40	1.4	1.3	1.8
30....	12	99	83	21	1.2	1.3	1.6
31....	12	....	79	....	1.0	1.5	....
Total	207.3	1603	1772	937.5	127.4	42.2	150.0
Mean.	6.69	53.4	57.2	31.2	4.11	1.36	5.00
Max..	16	118	120	70	14	4.8	13
Min...	1.9	11	10	8.3	1.0	0.5	1.6
Acre-ft.	411	3180	3510	1860	253	84	298

Total run-off for period=9,596 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Middle Mancos River Near Mancos, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.6	2.8	71	31	6.8	0.3	1.3
2.....	1.3	3.2	49	24	5.5	0.3	2.2
3.....	1.9	3.4	41	24	4.5	0.4	2.5
4.....	2.1	3.9	32	23	3.5	0.4	2.2
5.....	1.3	4.4	27	24	2.7	0.6	1.8
6.....	0.9	5.3	24	30	2.4	0.8	1.9
7.....	0.3	6.7	20	19	1.4	0.8	2.0
8.....	0.2	8.6	18	17	0.6	0.7	2.2
9.....	0.2	14	17	17	0.4	0.7	1.8
10.....	0.2	14	17	14	0.4	0.5	1.9
11.....	0.3	18	18	13	0.3	0.6	2.7
12.....	0.6	20	22	13	0.3	0.8	2.5
13.....	0.9	22	35	13	0.3	0.8	1.9
14.....	0.9	20	65	11	0.5	0.8	1.4
15.....	0.8	17	91	8.8	0.4	0.8	1.4
16.....	1.1	18	82	7.0	0.4	0.8	1.4
17.....	1.3	22	68	6.2	0.4	0.8	1.0
18.....	0.9	35	62	5.5	0.3	0.7	0.9
19.....	1.1	44	54	4.8	0.3	0.5	0.8
20.....	1.3	47	45	4.5	0.3	0.5	0.8
21.....	1.7	59	45	6.2	0.4	0.5	0.7
22.....	1.4	69	48	6.8	0.4	0.5	0.5
23.....	1.4	78	44	4.8	0.6	0.5	0.7
24.....	1.7	84	44	3.7	0.4	0.5	0.5
25.....	2.8	95	43	3.5	0.3	0.5	0.6
26.....	4.7	78	40	3.1	0.3	0.5	0.7
27.....	4.4	55	42	3.3	0.4	0.5	0.7
28.....	3.4	66	37	2.9	0.6	0.6	0.5
29.....	3.2	80	36	13	0.5	0.7	0.6
30.....	2.8	83	32	9.4	0.3	0.8	0.5
31.....	2.8	.....	30	.....	0.3	0.6	.....
Total	48.5	1076.3	1299	366.5	36.2	18.8	40.6
Mean	1.56	35.9	41.9	12.2	1.17	0.61	1.34
Max.	47	95	91	31	6.8	0.8	2.7
Min.	0.2	2.8	17	2.9	0.3	0.3	0.5
Acre-ft.	96	2130	2580	727	72	37	81

Total run-off for period=5,723 acre-feet.

Discharge of West Mancos River Near Mancos, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	218	180	124	17	35
2.....	155	170	102	16	60
3.....	133	187	90	16	62
4.....	108	180	81	14	47
5.....	95	170	72	15	35
6.....	84	159	63	13	36
7.....	73	150	56	12	40
8.....	64	139	52	15	39
9.....	62	135	48	16	29
10.....	60	128	43	15	28
11.....	67	120	38	15	52
12.....	84	120	38	48	43
13.....	131	122	39	26	33
14.....	206	104	35	24	24
15.....	246	102	33	18	22
16.....	224	104	31	15	21
17.....	204	106	28	12	18
18.....	175	100	28	10	14
19.....	164	88	26	9	12
20.....	142	80	25	8.2	11
21.....	144	100	27	7.8	9.5
22.....	150	131	33	7.8	9.0
23.....	144	112	37	7.8	8.2
24.....	155	100	31	11	8.2
25.....	180	95	26	14	8.2
26.....	235	209	86	24	7.8
27.....	192	224	90	25	11
28.....	231	246	99	26	12
29.....	254	246	251	22	14
30.....	274	221	170	20	15
31.....	204	.....	19	17	.....
Total	1187	4818	3878	1342	465.6	739.5
Mean	237	155	129	43.3	15.0	24.6
Max.	274	246	251	124	48	62
Min.	192	60	80	19	7.8	6.6
Acre-ft.	2350	9560	7690	2660	924	1470

Total run-off for period=24,654 acre-feet.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Mancos River Near Mancos, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	15	18	5.0	....	....	10	24	322	179	93	22	13
2....	14	14	....	....	....	12	35	461	177	100	19	12
3....	13	18	....	....	....	16	35	583	177	74	17	13
4....	12	43	....	....	....	20	30	650	156	59	16	11
5....	12	13	....	....	....	23	25	592	134	106	15	9.8
6....	15	9.4	....	....	....	24	45	491	120	71	24	9.8
7....	14	9.4	....	....	....	27	40	495	116	64	18	9.8
8....	13	9.4	....	....	....	30	78	597	132	55	14	8.7
9....	12	11	....	....	....	53	141	616	141	129	14	8.4
10....	11	6.9	*4.8	....	....	96	177	607	132	214	20	7.8
11....	9.8	13	....	....	....	126	191	578	143	221	19	7.2
12....	9.4	16	....	....	....	63	227	504	143	156	17	6.3
13....	10	11	....	....	....	59	265	526	128	130	15	5.6
14....	11	8.4	....	....	....	50	330	517	126	102	12	5.2
15....	11	8.1	....	....	....	56	395	491	112	82	7.5	5.2
16....	11	6.0	....	....	....	49	354	444	124	66	7.5	5.2
17....	11	5.8	....	....	....	73	254	440	126	56	8.1	5.2
18....	9.0	5.4	....	....	....	78	240	408	130	49	8.4	5.4
19....	12	5.0	....	....	....	69	272	399	124	40	6.3	5.4
20....	55	5.0	....	....	....	69	287	302	116	34	5.4	5.2
21....	40	6.0	....	....	....	66	354	284	122	39	4.8	5.4
22....	21	7.0	....	....	....	64	379	272	114	34	4.8	5.6
23....	20	8.7	....	....	....	66	310	262	110	27	4.6	5.8
24....	16	8.0	....	....	....	67	221	237	95	23	4.0	5.8
25....	15	8.0	....	....	*7.2	50	244	188	82	22	5.4	5.6
26....	13	8.0	....	....	....	28	379	171	89	25	5.8	5.4
27....	11	7.0	....	*4.1	....	25	428	191	110	24	6.0	5.2
28....	8.7	7.0	....	....	....	24	330	230	89	39	6.9	5.0
29....	7.8	6.7	....	....	....	21	254	284	85	38	6.9	11
30....	43	7.2	....	....	....	21	240	262	74	53	7.5	22
31....	22	....	....	....	....	22	....	205	....	26	11	....
Total	497.7	309.6	148.8	136.4	168	1457	6584	12609	3706	2251	352.9	236.0
Mean.	16.1	10.3	4.8	4.4	6.0	47.0	219	407	124	72.6	11.4	7.87
Max..	55	43	....	....	....	126	428	650	179	221	24	22
Min..	7.8	5.0	....	....	....	10	24	171	74	22	4.0	5
Acre-ft.	987	614	295	271	333	2890	13060	25010	7350	4460	700	468

Total run-off for water year 1936-37=56,440 acre-feet.

*Discharge measurement.

Discharge of Mancos River Near Mancos, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	22	4.2	3.0	....	....	7	4.6	348	315	168	14	27
2....	12	4.6	2.3	....	....	8	7.0	243	285	142	14	73
3....	10	4.9	3.4	....	....	9	11	201	312	122	14	87
4....	10	5.2	....	....	....	10	30	165	312	107	12	58
5....	8.4	4.2	3.2	....	....	10	68	142	308	92	12	34
6....	6.3	4.2	3.8	....	....	13	58	130	292	71	11	35
7....	5.2	4.2	3.2	*2.7	....	7.0	44	115	265	62	10	46
8....	5.2	4.2	2.8	....	....	3.5	53	100	240	49	10	42
9....	5.6	4.2	2.8	....	....	4.0	78	94	216	35	11	27
10....	5.6	4.6	2.8	....	....	5.2	108	94	204	35	12	27
11....	5.2	4.6	2.8	....	....	7.0	125	104	181	34	11	68
12....	4.9	4.9	2.8	....	....	13	133	127	173	35	18	66
13....	4.9	3.4	2.8	....	....	19	133	195	168	35	21	46
14....	4.9	2.3	2.8	....	....	8.4	120	348	142	34	20	30
15....	9.1	2.4	2.8	....	....	8.4	99	462	144	32	16	26
16....	16	2.4	2.8	....	....	15	91	422	132	29	14	24
17....	13	2.4	2.8	....	....	12	112	366	122	27	12	20
18....	10	2.4	2.8	....	*4.8	6.3	177	315	134	24	11	16
19....	8.4	2.3	2.8	....	....	13	262	295	115	24	10	14
20....	7.7	2.8	2.8	....	....	24	279	246	96	25	10	12
21....	5.2	2.6	2.8	....	....	33	322	253	134	32	9.4	11
22....	5.2	2.6	2.8	....	....	26	362	269	184	32	8.6	11
23....	10	3.0	2.8	....	....	25	392	259	147	38	7.4	10
24....	6.6	3.0	2.8	....	....	25	422	278	127	30	8.0	10
25....	6.3	2.5	2.8	....	....	42	434	325	115	20	9.8	10
26....	6.3	2.5	2.8	....	....	48	392	362	109	18	9.4	9.4
27....	6.3	2.3	2.8	....	....	26	392	377	109	30	8.2	9.2
28....	5.2	2.2	2.8	....	....	12	352	388	118	35	8.8	9.0
29....	4.2	3.4	2.8	....	....	6.3	403	384	402	23	10	8.8
30....	3.8	3.2	2.8	....	....	4.9	418	342	259	23	11	8.6
31....	3.8	....	2.8	....	....	4.5	....	228	....	15	12	....
Total	234.3	101.7	89.1	93.0	140	450.5	5784.6	8077	5860	1474	365.6	875.0
Mean	7.56	3.39	2.87	3.00	5.00	14.5	193	261	195	47.5	11.8	29.2
Max..	22	5.2	....	....	....	48	434	462	402	168	21	87
Min..	3.8	2.2	....	....	....	3.5	4.6	94	96	15	7.4	8.6
Acre-ft.	465	202	177	184	278	894	11470	16020	11620	2920	725	1740

Total run-off for water year 1937-38=46,700 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Mancos River Near Towaoc, Colo., for Year Ending Sept. 30, 1937.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	22	75	22	....	11	18	118	215	136	47	7.0	3.8
2.....	21	81	19	....	10	20	166	292	118	54	7.0	6.5
3.....	20	49	16	....	11	26	166	408	103	66	9.5	5.0
4.....	20	29	13	....	12	23	131	515	99	53	7.0	4.7
5.....	20	27	7.0	....	14	26	123	560	86	44	5.5	4.2
6.....	25	31	4.5	....	14	27	146	450	80	120	5.0	4.3
7.....	27	32	3.5	....	13	30	127	346	74	63	7.0	7.0
8.....	21	30	3.5	....	12	38	127	408	68	68	5.5	7.4
9.....	18	27	3.5	....	12	54	178	472	64	63	6.0	5.8
10.....	16	27	*3.4	....	12	68	259	450	59	127	6.0	5.5
11.....	16	26	3.5	....	13	86	275	515	58	387	5.7	5.0
12.....	16	25	4.0	....	13	86	328	472	55	275	5.3	4.7
13.....	16	25	4.0	....	14	86	346	429	56	156	5.0	5.2
14.....	16	25	4.5	....	14	118	408	429	58	104	4.7	5.0
15.....	15	26	4.5	....	14	101	515	429	58	80	4.3	4.2
16.....	15	27	4.5	....	14	98	560	387	49	68	4.0	4.0
17.....	14	27	4.5	....	15	148	450	366	43	58	4.0	4.0
18.....	14	27	5.0	....	16	173	375	328	40	54	4.6	3.8
19.....	15	27	5.0	....	17	109	366	275	42	44	4.8	3.8
20.....	83	27	5.5	....	16	89	408	223	40	36	4.0	3.7
21.....	58	27	6.0	....	15	89	450	178	39	33	3.8	3.5
22.....	46	27	6.0	....	16	101	560	156	40	26	3.5	3.5
23.....	51	25	6.5	....	16	146	472	166	42	20	3.2	3.8
24.....	27	23	6.5	....	15	92	328	156	38	20	3.0	3.8
25.....	24	20	6.5	....	15	86	275	152	32	11	3.0	3.8
26.....	18	20	6.0	....	23	80	346	127	31	18	2.7	3.5
27.....	18	20	6.0	*10	18	80	472	101	93	23	2.6	3.7
28.....	18	21	6.0	....	18	84	387	93	74	192	2.7	4.2
29.....	18	24	6.0	....	....	74	275	101	58	101	3.0	2.6
30.....	99	24	6.0	....	....	101	202	189	54	11	3.0	186
31.....	95	....	6.0	....	....	101	....	178	....	9.5	3.0	....
Total	902	901	207.9	263.5	403	2458	9339	9566	1887	2431.5	145.4	339.4
Mean.	29.1	30.0	6.71	8.50	14.4	79.3	311	309	62.9	78.4	4.69	11.3
Max..	99	81	22	....	23	173	560	560	136	387	9.5	186
Min..	14	20	3.4	....	10	18	118	93	31	9.5	2.6	3.5
Acre-ft.	1790	1790	412	523	799	4880	18520	18970	3740	4820	288	673

Total run-off for water year 1936-37=57,200 acre-feet.

*Discharge measurement.

Discharge of Mancos River Near Towaoc, Colo., for Year Ending Sept. 30, 1938.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	28	6.6	....	....	....	135	74	471	214	172	4.9	115
2.....	11	6.6	....	....	....	104	80	336	187	129	3.4	106
3.....	9.9	6.6	....	....	....	117	80	248	165	119	.4	127
4.....	9.9	5.2	....	....	....	254	149	209	165	117	.4	76
5.....	9.4	4.4	....	....	....	125	198	169	165	111	.4	57
6.....	7.7	4.4	....	....	....	89	174	145	155	79	.4	47
7.....	7.7	4.4	....	*5.9	....	86	153	133	149	54	.4	32
8.....	7.7	6.6	....	....	....	101	107	119	133	45	1.4	37
9.....	7.7	7.7	....	....	....	101	123	107	120	40	1.5	47
10.....	6.0	8.2	*5.5	....	....	86	163	103	109	30	2.0	37
11.....	6.0	9.4	....	....	....	86	198	93	109	24	2.0	76
12.....	6.6	9.4	....	....	....	93	275	90	93	16	2.5	70
13.....	7.7	9.4	....	....	....	135	266	101	89	11	3.0	52
14.....	6.6	9.4	....	....	....	145	236	155	98	5.5	3.5	42
15.....	9.4	9.4	....	....	....	109	209	322	86	13	3.0	32
16.....	23	9.4	....	....	....	86	209	322	80	12	1.5	42
17.....	16	6.6	....	....	....	109	195	322	74	6.6	1.4	47
18.....	12	6.6	....	....	*11	109	266	257	55	5.5	1.0	37
19.....	9.4	5.5	....	....	....	101	421	230	50	4.4	.8	24
20.....	9.4	6.6	....	....	....	101	538	210	48	3.9	.4	24
21.....	9.4	9.4	....	....	....	135	518	220	107	2.0	0	28
22.....	9.4	9.4	....	....	....	109	538	225	55	47	0	28
23.....	9.4	9.4	....	....	....	109	578	200	125	37	0	28
24.....	9.4	9.4	....	....	....	117	625	195	93	16	0	24
25.....	9.4	9.4	....	....	....	125	704	190	84	12	0	20
26.....	9.4	9.4	....	....	12	125	666	187	71	12	0	20
27.....	9.4	9.4	....	....	18	109	444	214	65	7.7	1.0	20
28.....	9.4	9.0	....	....	29	101	382	228	65	6.6	1.0	20
29.....	9.4	8.9	....	....	....	101	468	242	86	12	.8	16
30.....	8.2	8.9	....	....	....	101	440	242	333	10	9.4	12
31.....	7.2	....	....	....	....	86	....	214	....	7.7	128	....
Total	311.1	234.8	173.6	229.4	336	3490	9477	6569	3428	1167.8	174.4	1343
Mean.	10.0	7.93	5.6	7.4	12	113	316	212	114	37.7	5.63	44.8
Max..	28	9.4	....	....	....	254	704	471	333	172	128	127
Min..	6	4.4	....	....	....	86	74	90	48	2.0	0	12
Acre-ft.	617	466	344	455	666	6920	18800	13030	6800	2320	346	2660

Total run-off for water year 1937-38=53,420 acre-feet.

*Discharge measurement.

Unless otherwise noted, all discharges are in cubic feet per second.

CHAPTER XVI

REPORT OF FLOODS ON BEAR CREEK AND MT. VERNON CREEK 1933, 1934 AND 1938

L. T. BURGESS, Chief Hydrographer

Striking with the usual swift, disastrous results, a flood occurring on Bear Creek and Mt. Vernon Creek, caused by heavy rains on the water shed of Genesee Mountain, descended upon the town of Morrison the night of September 2, 1938. Rains of varying intensity from 4 to 8 inches began falling about 4:00 P. M. and reached the greatest force between 6:00 and 9:00 P. M.

General rains occurred throughout the day of September 2nd over the mountainous country east and west of the Continental Divide. The writer, returning to Denver on the afternoon of the 2nd, encountered rain storms of varying intensity from Loveland Pass to Georgetown, and thence along the upper reaches of Clear Creek, between Idaho Springs and the top of Floyd Hill.

Coming down from the headwater of Mt. Vernon Creek, about 3:30 P. M., several extremely hard rains were encountered. These rains were moving rapidly in a northeast direction, but no unusual run-off was observed at this time. Mt. Vernon Creek was not running water at a point two miles above Morrison.

Very heavy black clouds were observed at that time gathering near Genesee Mountain so it was no great surprise to receive word of a flood in Bear Creek about 7:00 P. M. that evening.

The rain, which had occurred in scattered showers over the surrounding country in the early afternoon localized on the Genesee Mountain watershed, centering along the divide between Bear Creek and Mt. Vernon Creek. At 6:00 P. M. over this area it was reported to be raining hard. At Idledale the hard rain began about 6:00 P. M. and continued for at least 1½ hours. From Idledale up as far as O'Brien Gulch hard rains were reported and on the gulch and around the divide between it and Mt. Vernon Creek measurements of rain, made in various receptacles, varied from 4 to 10 inches. It appears that this amount of rain fell in a period of from 1½ to 2 hours over a large part of the watershed of Genesee Mountain.

The greater part of the runoff from these rains collected in Cold Spring Gulch, locally known as O'Brien Gulch, from parts of Sections 14, 15, 22, 23, 25 and 26, Twp. 4 S., Range 71 W., discharging into Bear Creek at the northwest corner of Section 31, Twp. 4 S., Range 70 W. The major part of the flood came out of this gulch in one rush. However, there was one small side draw, near the mouth of this gulch, which discharged approximately 2,000 second feet of water into Bear Creek before the main flood.

A slope measurement was made on Cold Spring Gulch, above the mouth, by Mr. Sawyer of the U. S. Geological Survey, and he determined the peak flow to be 9,000 second feet. This peak entered Bear Creek immediately after the small flush from the side draw. The drainage area of Cold Spring Gulch is 4.3 square miles.

At a point on Bear Creek, approximately $1\frac{1}{2}$ miles downstream from the mouth of Cold Spring Gulch, the writer made a slope area determination and found the peak discharge to be approximately 6,500 second feet. While these cross sections were not of the best, they do represent typical sections of the canon at this point and show the flattening out effect on the peak flow after it entered the larger water course of Bear Creek.

Discharging out of Cold Spring Gulch into Bear Creek the flood backed upstream more than $\frac{1}{4}$ mile. Piles of gravel, sand and debris were deposited along the stream bed well upstream from the mouth of the gulch. A great delta of large boulders, rocks and bars of gravel was deposited in the bed of Bear Creek at the mouth of the gulch and extended about $\frac{1}{2}$ mile downstream.

The sudden flood crest swept several automobiles from the highway along the stream bed between the mouth of the gulch and Idledale, causing a loss of eight lives and much property damage.

Continuing down the canon the flood arrived at the gaging station at Morrison, approximately $5\frac{1}{2}$ miles downstream, at 5:50 P. M. The crest of this flood reached a gage height of 9.20 feet, as determined from highway marks. From a slope determination at the mouth of the canon the maximum discharge was determined to be 6,200 second feet. The first water reached the gage at 5:50 P. M., the discharge at that time being 205 second feet. At 6:00 P. M. the gage height was 1.90 feet; discharge 285 second feet, and at 6:30 P. M. the gage height was 2.70 feet; discharge 700 second feet. The water rose rapidly reaching the peak at 7:15 P. M. Discharge 6,200 second feet. At this time the inlet to the stillwell was covered over 5 feet deep with rocks and debris and the balance of the record was lost at this station.

From accounts of witnesses and citizens around the town of Morrison the peak lasted but a short time and had receded 3 feet within an hour. A flow of several hundred feet was maintained in the creek for several days after the flood.

The same rain deluging Genesee Mountain caused Mt. Vernon Creek to go on a rampage. This creek, usually dry, drains a large part of the north and east slopes of the mountain and the water enters Bear Creek from the north, passing through the center of the town of Morrison. The drainage area of Mt. Vernon Creek above Morrison is 9.5 square miles.

From a slope determination made above Cherry Gulch the writer estimated that the maximum discharge in Mt. Vernon Creek was approximately 3,200 second feet. From accounts

gathered from residents the water out of Mt. Vernon Creek arrived at Mt. Morrison a few minutes after the crest in Bear Creek reached the town.

Due to the great amount of water, and the rapidity with which it discharged from the steep gradient of Mt. Vernon Canon into the flatter plane of Bear Creek Valley at Morrison, it filled the outlet of Mt. Vernon Creek with debris, rock and gravel, and spread out, leaving deposits of debris 4 to 6 feet deep. It has been practically impossible to obtain definite records as to the duration of the Mt. Vernon Creek flood, but from such meager information gathered it appears that the peak was reached within five to ten minutes, and had receded to approximately 200 second feet within 30 to 40 minutes.

Continuing down the valley below Morrison, overflowing its banks and spreading out over the bottom lands, the flood reached the State gaging station at the mouth of Bear Creek near Sheridan Junction at 10:00 P. M. A maximum gage height of 7.21 feet was reached at 10:20 P. M. The discharge at this gage height was determined from a slope area measurement to be 2,810 second feet. The following table of gage heights from the recording gage, and corresponding discharges, shows the rapid rate of rise and fall of the flood:

Bear Creek at Mouth Near Sheridan Junction

Date	Hour	Gage Height in Feet	Discharge Sec. Ft.	Acre Feet
Sept. 2, 1938	10:00 P.M.	2.95	120	1
	10:05	3.50	218	4
	10:10	4.75	825	25.0
	10:20	7.21 (Crest)	2810	146
	11:00	6.80	2450	169
	12:00 Midnight	5.70	1600	101
	1:00 A.M.	4.30	815	60
Sept. 3, 1938	2:00	3.90	633	50
	3:00	3.75	570	46
	4:00	3.70	545	130
	7:00	3.60	500	
Total				732

It is interesting to note that the total flow between 10:00 P. M., September 2, and 7:00 A. M., September 3, passing the gaging station near the mouth was but 732 acre-feet of water. However, a great deal of storage occurred in fields and from bank storage resulting from the overflowing of the creek banks between Morrison and this point. Gradual drainage back to the creek from these lands helped keep the discharge of the creek at several hundred feet for a week or more.

On July 7, 1933, the first disastrous flood in recent years passed down Bear Creek, causing great damage to the town of

Morrison. Unusually hard rains on the southeast drainage area of Genesee Mountain between 11:00 A. M. and 1:30 P. M. sent a wall of water rushing down Sawmill Gulch, which enters Bear Creek at Idledale, formerly called Starbuck. Adding to this water all the arroyos carried large heads of water and Cold Spring Gulch contributed to the total.

At this time a great loss of life, approximately 15, occurred between Cold Spring Gulch and points below Idledale. Cars were washed off the roads and many occupants drowned. Cabins along the stream at Idledale were swept away. The State Highway along the creek bed was completely washed out in many places.

A gaging station was maintained at Idledale at the east end of the village. The first rush of water out of Sawmill Gulch swept the gage away. It was estimated, however, that 6,500 second feet discharged out of Sawmill Gulch into Bear Creek at Idledale. The drainage area of this gulch covers 2.28 square miles. The flood struck Idledale at 1:00 P. M. July 7, and was estimated to be of 30 minutes duration. The water from the gulch was augmented by the flood from the area between Idledale and Cold Spring Gulch so that the peak at Morrison was much greater.

No gaging station was being maintained at Morrison at the time of this flood. From a slope area determination, made $\frac{1}{4}$ mile above Morrison, the maximum discharge was computed to be 8,000 second feet. The wall of water from this flood swept through Morrison damaging property on both sides of the stream. Most all damage resulted from the overflow of Bear Creek.

The crest traveled downstream rapidly, reaching the town of Morrison at 1:30 P. M. Within 10 minutes the main highway bridge washed out. The stream was back in its banks at 2:30 P. M. according to eye-witnesses. Within half an hour the stream had fallen from the peak to a depth of approximately 3 feet, and was crossed by a man, William Tudor, Jr., on a horse in one hour after the peak at Morrison.

This was the second flood of such proportions occurring within a 28 year period, according to natives. From records in the State Engineer's office, the maximum discharge occurring during the period of record for the gaging station maintained on Bear Creek at Morrison from 1888 to 1891, and from 1895 to 1902, was estimated at 8,600 second feet. This flood occurred on July 24, 1896.

At Morrison the flood of July 7, 1933, was augmented by an additional 1,500 second feet discharging from Mt. Vernon Canon into Bear Creek. This flood struck the town simultaneously with the flood in Bear Creek and overflowed its banks, depositing rocks, boulders, gravel and mud in buildings on the north side of the highway in Morrison.

The flood passed downstream washing farms, damaging headgates and ditches principally. At the state stream gaging station at the mouth of Bear Creek the flood arrived at 4:00 P. M. July 7, reaching a peak discharge at 4:45 P. M., of 6.95 feet; discharge 3,000 second feet from slope area determination. The following table shows the rise and fall of the flood at the mouth of Bear Creek:

Date	Hour	Gage Height in Feet	Discharge Sec. Ft.
July 7, 1933	4:15 P.M.		400
July 7, 1933	Peak 4:45	6.95	3000
July 7, 1933	5:45	6.50	2170
July 7, 1933	6:20	5.20	1340
July 7, 1933	9:15	3.30	505

Two smaller floods occurred in the same year. One on July 8 at 10:00 P. M. reached a crest gage height of 4.42 feet; discharge 950 second feet at the mouth of Bear Creek. The second occurred September 9, reaching a crest gage height of 5.38 feet at 12 midnight; discharge 1,450 second feet. No damage was done by these small rises, and they are merely mentioned here to show that additional, but smaller, floods occurred in 1933. The flood of September 10, at Idledale, did little damage.

The following year, on August 9, 1934, a second flood came down Bear Creek from the same vicinity as the flood of 1933. From highwater marks the crest of this flood reached a gage height of 7.07 feet, and a maximum discharge of 4,620 second feet, at the gaging station at Idledale.

The flood again washed out the gage and the record was lost. This flood originated in Cold Spring Gulch, and gulches to Idledale. The flood reached the gage at 1:00 P. M., August 9, 1934. The peak lasted for approximately 25 minutes and receded rapidly, according to statements gathered from witnesses. According to a statement made by Mr. Starbuck he thought there was more water than in the 1933 flood. The water passed through Idledale with less damage during this flood as the bridges did not clog up with debris.

Estimates were made immediately after the flood that a discharge of not over 200 second feet was in Bear Creek before Cold Spring Gulch flooded.

The water passed rapidly down Bear Creek, doing a minimum of damage.

A flood of approximately 1700 second feet came out of Mt. Vernon Creek meeting the Bear Creek flood at Morrison. From a slope area determination made immediately below town, the maximum discharge was 6,400 second feet. Of this amount it was estimated that 1700 second feet came from Mt. Vernon Canon. Very little damage resulted in Morrison from the main stream, although some flooding of stores was caused by Mt. Vernon

Creek as the channel was incapable of carrying off such a large head of water.

At the gaging station at the mouth of Bear Creek the flood arrived at 4:05 P. M., August 9th. The following gage heights were taken from the automatic water stage recorder chart:

Bear Creek at Mouth

Date	Hour	Gage Height in Feet	Discharge Sec. Ft.
Aug. 9, 1934	4:00 P.M.	0.90	5
	4:10	5.22	1300
	4:35	4.70	1000
	5:00	3.50	475
	6:00	2.50	200
	9:00	1.00	52

The field data was collected by State Hydrographers J. E. Whitten, C. E. McGraw, F. C. Hart, C. E. Schnurr and W. E. Wagner. Mr. J. E. Van Gorden, Water Commissioner at Morrison, assisted in obtaining the data.

REPORT OF FLOODS IN THE SOUTH PLATTE RIVER
TRIBUTARIES DURING SEPTEMBER, 1938.

L. T. BURGESS, Chief Hydrographer

The tributary streams of the South Platte River which flow out of the mountains and foothills of the front range are frequently subject to flash floods. On the larger of these streams gaging stations have been maintained for varying periods of years, located at the approximate mouths of the canons. In this review of floods we shall start with Clear Creek and proceed north to the Cache la Poudre River at Fort Collins. Bear Creek has been more or less thoroughly covered in a report dealing with that watershed area.

Above Golden, at the mouth of the canon, a stream gaging station has been maintained by the state for years, during which period of record from 1908 to 1909, and 1911 to 1938, the maximum known discharge occurred on August 1, 1888, with a discharge of 8,700 second feet. No record of the duration of this flood is available. In recent years the maximum discharge occurred on September 9, 1933. At a gage height of 7.97 feet (high gage height caused by dam constructed below gaging station for placer purposes, which later washed out) the maximum discharge was computed from a slope measurement to have been 5,890 second feet.

During the floods which were recorded at many of the stream gaging stations on these tributaries, Clear Creek did not have an extremely high runoff and could hardly have been considered as a flood as no damage resulted along the stream through Golden.

The table following below gives the gage heights as recorded on the automatic gage and the corresponding discharges for Clear Creek:

Date	Hour	Gage Height	Discharge	Acre Feet
Sept. 2		1.81		
"		2.55		
"		2.85		
"	8:00 P.M.	2.34	1020	73
	8:15	3.20	2080	32
	8:30	3.85	3000	52
	8:45	4.20	3520	67
	9:00	4.57	4100	79 Peak
	9:15	3.90	3070	74
	9:30	2.90	3200	65
	9:45	2.77	1720	51
	10:00	2.63	1550	34
	11:00	2.54	1450	124
	12:00 Midnight	2.52	1420	119
Sept. 3	1:00 A.M.	2.50	1390	116
"	2:00	2.47	1360	114
	3:00	2.45	1340	112
	4:00	2.43	1320	110
	6:00	2.40	1280	215

South Boulder Creek suffered the greatest known flood on September 2, 1938. A gaging station has been maintained on South Boulder Creek near Eldorado Springs for years. During the period of record 1888 to 1892, 1895 to 1901, 1904 to 1938, only once has there been a record of a large flood prior to 1938. On June 3, 1895 the maximum discharge was computed at 1,090 second feet. This amount of water could not have caused much damage.

On September 2, 1938, extremely hard rains over a very small drainage area adjacent to Eldorado Springs caused the greatest flood in South Boulder Creek ever recorded. From reports gathered from ranchers and miners residing above the town in the surrounding territory the rain began about 4:00 P. M. and continued in a downpour until 6:00 P. M. when it either stopped raining or continued for a few hours more with less intensity. Most of the reports obtained show that there was from 2 to 3 inches of rain during this two hour period. No rain, other than a light shower, occurred at Pine Cliff below Rollinsville.

At the gaging station located up the canon about 1 mile above Eldorado Springs, the automatic water stage recorder obtained a good record of the rise and fall of the stream until the water-soaked clock stopped about 10:00 A. M. on the fol-

lowing day. The water struck the gage shelter with such force that it was bent over and the highwater mark was half way up on the face of the clock. The following table shows the gage heights as taken from the automatic recorder and the discharges for these gage heights:

Flood Data on South Boulder Creek at Eldorado Springs
 Pear Gage Height Was 9.24 and Occurred on Sept. 2, 1936,
 at 10:00 P. M.

Hour	Date	Gage Height	Discharge	Acre Feet
7:00 P.M.	9-2-38	2.30	90	12
7:30	"	3.50	470	30
8:00	"	4.50	970	58
8:30	"	5.70	1850	111
9:00	"	7.10	3500	186
9:30	"	8.30	5500	267
10:00	"	9.24	7400	306
10:30	"	9.24	7400	295
11:00	"	9.00	6900	262
11:30	"	8.50	5800	221
12:00 Midnight	"	8.00	4900	180
12:30 A.M.	9-3-38	7.70	4400	171
1:00	"	7.40	3900	153
1:30	"	7.10	3500	136
2:00	"	6.80	3100	120
2:30	"	6.50	2700	105
3:00	"	6.20	2400	91
3:30	"	5.90	2000	78
4:00	"	5.60	1800	69
4:30	"	5.30	1550	59
5:00	"	5.00	1300	99
6:00	"	4.70	1100	88
7:00	"	4.60	1025	82
8:00	"	4.50	975	78
9:00	"	4.40	920	73
10:00	"	4.30	855	73
Total				3281

The first raise passed the recording gage at 7:30 A. M., September 2, 1938. The peak was recorded at 10:00 P. M., the gage height being 9.24 feet, which was obtained from the high water mark in the stillwell. A slope measurement made at the gaging station shows a maximum discharge of 7,400 second feet.

This amount was checked by a cross section and slope measurement made at the Community dam above the town by the U. S. Geological Survey, who obtained a maximum discharge of 8,000 second feet. There was an estimated inflow between the two points of approximately 500 second feet.

The flood passed on down the stream spreading out as it left the canon. At the main highway bridge of the Denver-Boulder road the crest arrived at 10:15 P. M.

Property damage was exceedingly heavy in the resort town of Eldorado Springs and to mountain cabins flanking the stream in the upper canon. Many summer cabins were washed away and others damaged, and the supports of the dance hall at the resort were washed out, causing the hall to collapse. As no floods of any great size have recently come down the stream the channel has gradually been restricted through the resort and houses and cabins built along the banks. These houses were undermined and many destroyed. No lives were lost in this area. Considerable damage to irrigation works was suffered immediately below the canon mouth and many ditches were unable to divert water until deposits of sand and gravel were cleaned out of the headgates and the upper ditch sections.

Coal Creek, which drains the territory adjacent to South Boulder Creek, experienced a large flood but damage was confined to bridges and roads. There is little farming area along the creek after it leaves the canon until it descends into the plains area so that the peak had spread out and slowed down, thus passing through the channel with minor flooding of banks.

The hard rains seemed to miss the headwaters of main Boulder Creek and although the stream rose above normal there was no damage along its course until the waters from South Boulder Creek entered below Valmont. It was estimated that approximately 8,000 second feet entered St. Vrain Creek from Boulder Creek and its tributaries at the peak flow.

St. Vrain Creek, at Lyons, had what may be termed high-water past the gaging station, but not an extreme flood condition. Several raises were recorded from September 1 to September 4, but the maximum discharge at gage height of 4.74 feet only amounted to about 1560 second feet. There are several conflicting reports concerning the flow at this station, but the above figures are authentic and taken from the automatic recording gage chart.

The greatest amount of water entered the river below the station from the north through Noland Gulch. No estimate of this amount is available as it spread out over the country. Reports of very hard rains as high as 6 inches in 24 hours were obtained over the area, especially north toward the Big Thompson drainage.

The Creek flow gradually increased as tributaries and gulches poured their rain water into the main channel. Estimates of as

high as 3,500 second feet discharge were made at Longmont. The water from Boulder Creek enters the St. Vrain above the mouth, and the combined flow caused a peak at the gaging station near Platteville of 8.93 feet, gage height and discharge of 8,360 second feet by slope area method. The bottom lands were completely inundated and due to the large head in the South Platte river at the same time the recession of the flood waters was very slow.

Prior to this flood the maximum discharge recorded was on June 14, 1934, at a gage height of 5.10 feet; discharge 4,300 second feet.

The Big Thompson River had the greatest succession of floods from September first to fourth, of any of the tributaries.

A gaging station is being maintained at the Canon mouth, just above the Handy Ditch dam. Three of the floods originated from rain which fell between this gaging station and the station below the Power House, about 5 miles upstream. The following table shows the discharge data as computed for the gage heights recorded on the automatic gage at the canon mouth station:

Big Thompson River at Canon Mouth, 1938

Date	Hour	Gage Height	Discharge	Acre Feet
Sept. 1	6:00 P.M.	1.66	222	
	7:00	1.86	272	20
	7:15	3.00	860	12
	7:30	4.00	1700	26
	7:45	5.00	2900	48
	8:00	6.60	5600	88 Peak
	8:15	6.00	4450	104
	8:30	5.50	3600	83
	8:45	4.75	2550	64
	9:00	3.80	1500	42
	9:15	3.40	1150	27
	9:30	3.05	900	21
	10:00	2.80	720	33
	11:00	2.68	640	56
Sept. 2	12:00 Midnight	2.50	530	48
	2:00 A.M.	2.20	390	76
	4:00	2.00	315	58
	6:00	1.88	278	49
	5:30 P.M.	1.83	263	34
	5:40	2.90	790	7
	6:00	2.80	720	21
	7:00	2.65	620	55
	9:00	3.20	1000	134
	12:00 Midnight	3.23	1040	253

Big Thompson River at Canon Mouth, 1938—Continued

Date	Hour	Gage Height	Discharge	Acre Feet
Sept. 3	1:00 A.M.	3.50	1230	94
	2:00	3.80	1500	113
	3:00	4.08	1770	135
	4:00	4.20	1900	152
	5:00	4.38	2100	165
	6:00	4.40	2130	175
	7:00	4.40	2130	176
	8:00	4.60	2400	187
	9:00	4.80	2600	207
	10:00	5.00	2900	227
	11:30	5.05	2950	363
	12:00 N.	5.00	2900	121
	1:00 P.M.	4.90	2750	233
	2:00	4.83	2650	223
	6:00	4.40	2130	790
	9:00	4.30	2000	512

The maximum known flood at the station above, near Drake, was estimated at 8,000 second feet July 31, 1919.

Tributaries of the Big Thompson river which enter below the Canon station contributed most of the water which caused the flood damage above and below Loveland. The U. S. Geological Survey made a study of several of these floods on Buckhorn and Redstone Creeks near Masonville. On September 1, 1938, the peak discharge of Buckhorn Creek, as determined by slope area measurement, was 10,200 second feet. On the same date Redstone Creek near Masonville discharged 8,410 second feet as determined by slope measurement.

All of this water came down Buckhorn Creek, entering the Big Thompson river in Sec. 7, Twp. 5 N., R. 69 W. Buckhorn reservoir, and reservoirs around Loveland, stored as much as possible of the flood water. By the time the flood from Buckhorn Creek had reached the Big Thompson the size of the peak had been greatly reduced.

At the mouth of the Big Thompson the stream gradually rose from September 2nd. At noon, September 3rd, the gage height was 4.75 feet. The peak occurred at 11:00 P. M., September 3, 1938, at gage height of 7.31 feet, discharge 3,000 second feet. At 3:00 P. M., September 4, the gage read 6.73 feet; at midnight 6.75 feet, and gradually receded to gage height of 4.32 feet at noon September 7th. The discharge remained at approximately 400 second feet for the next several days.

The Cache la Poudre River at the mouth of the Canon near Fort Collins, did not have a large flood at this time. The peak flow was about 1,700 second feet. The water from rains south

and west of Fort Collins caused a slight flood, but most all of this water entered the river below the gaging station.

Due to the inflow to the Platte river from the side streams the largest flood since 1921 occurred at Kersey. The maximum discharge at this station was 18,500 second feet on September 4, at 1:00 P. M., gage height 9.73 feet. This water proceeded slowly down the river, flooding bottom lands and damaging irrigation headworks. The maximum discharge recorded was on June 7, 1921, at 31,000 second feet.

The South Platte River from the mouth of the canon at Waterton to the gaging station at the state line at Julesburg was in flood for the first 12 days of September, due to the tributaries emptying their flood waters. Rains on the upper river caused a peak flow at the Waterton gaging station at 3:30 P. M. on the 3rd of September, reaching a maximum discharge of 1,630 second feet. This peak fell rapidly as most of the water came from the upper areas of the watershed. The maximum recorded at this station for the period of record was 2,150 second feet, June 9, 1926.

By the time the flood waters from Bear Creek had entered the river and reached the gaging station at Denver the flow had smoothed out so that there was a slow steady rise. The peak occurred at 1:00 A. M. on the 3rd of September; gage height 4.84 feet; discharge 4,130 second feet. The greatest flow recorded at the Denver station was on September 10, 1933, at which time the maximum discharge was computed from slope area measurement to be 22,000 second feet. Most all of this water came into the river between Waterton and Denver by Cherry Creek and the Little and Big Dry Creeks. The gage height reached was 10.98 feet.

The flood traveled slowly down the river with Clear Creek adding approximately 2,500 second feet so that the crest at the Fort Lupton gaging station on the morning of September 4 reached a discharge of 4,220 second feet at a gage height of 4.88 feet at 5:00 A. M. The river rose very slowly as bottom lands along the river were being flooded at this stage. Practically the only damage in this section was caused by flooding of bottom lands. On September 10, 1933, a maximum discharge was recorded at this station of 4,150 second feet at a gage height of 5.80 feet (different datum). At the time of this flood the automatic recording gage was located 500 feet below the main highway bridge and at a different datum. The present location is approximately $\frac{1}{4}$ mile above the bridge.

Between the Fort Lupton and Kersey gaging stations the tributary inflow was tremendous. Practically all of the water from the mountainous, and foothills area, northwest of the river from Eldorado Springs north to Berthoud, flows into the river between these stations. The bulk of the flood water was recorded in this area. At the Kersey gaging station the peak flow was

reached at 1:00 P. M. on the 4th of September, with a discharge of 18,500 second feet at a gage height of 8.96 feet. This water passed on down the river flooding the low lands and damaging a good many irrigation canal headworks. Other damage was limited to flooding of bottom lands but no loss of life occurred. The maximum discharge recorded at this station during the period of the record was on June 7, 1921, at which time the discharge was 31,000 second feet.

The flood waters traveled more slowly down the river and were not materially added to by tributary inflow. Some water entered the river from Bijou Creek, but this water was ahead of the main flood. At the Sublette gaging station the peak was 10,660 second feet at a maximum gage height of 8.78 feet on September 5, 1938, at 11:00 P. M. The maximum known flood at this station was on June 7, 1921, with a discharge of about 30,000 second feet.

The record at the Balzac gaging station shows that the peak arrived at 6:00 A. M., September 8, 1938, with a discharge of 15,650 second feet. The maximum flood occurred in 1935, but the amount was not determined as the water spread all over the river bottom. This flood was caused by the big flood in Bijou Creek on Decoration day. The other large flood recorded during the period of record at this station was on June 11, 1921, with a maximum discharge of 31,200 second feet.

The flood water passed down the river and out of this state into Nebraska on the 10th day of September, 1938. The peak flow reached the gage at Julesburg, Colorado, at 4:00 A. M. with a discharge of 7,980 second feet. Damage along the river was not excessive and outside of some damage to canals the balance was from flooding of river bottoms. The maximum discharge for the period of record at the Julesburg station occurred on June 2, 1935, with a discharge of 31,300 second feet. This was greater than the 1921 flood which reached a maximum discharge of 30,800 second feet.

REPORT ON FLOOD IN SOUTH PLATTE RIVER BASIN SEPTEMBER 2, 1938

By J. E. WHITTEN, Special Deputy

On the eve of September 2, 1938, at about 7:00 P. M., the writer was informed by T. L. Platt, Water Commissioner of District No. 6, that a flood was on the way down South Boulder Creek, and that it had struck the town of Eldorado Springs a few minutes previously. I instructed Mr. Platt to store all possible water, in order to lessen the volume down the stream as much as possible, and informed him that I would leave immediately for the flooded area. The trip from Denver to Boulder required two hours time, due to hazardous road conditions, and several stops

were made enroute as visibility was reduced to nearly zero by the downpour which was general over the entire eastern slope foothills from near Palmer Lake to Fort Collins.

The crest of the flood down South Boulder Creek arrived at the Denver-Boulder highway at 10:15 P. M. and flowed over the pavement to a depth of more than a foot for a distance of 2400 feet. These figures were obtained by actual measurement by the writer. The bridge at the usual channel, which is 30 feet across, with an average clearance of 6+ feet, was running full, with a head of 2 feet on the upstream side. Under those conditions this bridge was passing approximately 2,000 second feet. This amount, together with the amount crossing over the pavement, gives about 10,000 second feet, at the peak flow. There was considerable water entering the stream all along its course, and with an estimated 1,500 second feet in Main Boulder, the estimated discharge from Boulder Creek into the St. Vrain, is 8,000 second feet, showing an abatement of about 4,000 second feet.

Unlike most sudden floods, this flood did not rise and fall rapidly, the flow at near peak stage having been maintained for a period of several hours. All the lowlands adjacent to the stream were flooded to a depth of several feet, but there was no loss of human life reported, and very little loss of livestock in the South Boulder flood, although the property damage was great and reputedly unsurpassed in the Eldorado Springs area where a large portion of the town, and some of the highway was entirely destroyed.

Domestic water supplies to Eldorado Springs and Lafayette, were critical problems, due to destruction of the water mains and feeder pipelines.

At approximately the same time (7:00 P. M.) that the water hit Eldorado Springs, reports were broadcast by radio that the Town of Morrison on Bear Creek was flooded, the damage exceeding that of the disastrous flood of July 7, 1934. There was considerable loss of life; as reported, the exact number not yet known. Morrison is situated at the confluence of the Vernon Canon drainage with Bear Creek, and the carrying capacity of the Vernon Canon channel through Morrison has again, as in the past, proven inadequate to meet cloudburst conditions, a fact which should be recognized before the town is again rebuilt. Water and electrical service failed soon after the flood struck in Morrison.

The storm caused the St. Vrain to raise to flood stage and also the Big Thompson and Little Thompson. While all the eastern slope streams were high, and there was considerable property damage, very little loss of life resulted, considering the magnitude of the flood which attained a peak flow of 20,000 at Kersey on September 4th.

After entering the South Platte river the waters moved slowly and did but comparatively little damage, although a flow

of such volume would be expected to wreck most of the structures in its path.

The loss to irrigation companies was heaviest in Water District No. 4, on the Big Thompson, where several headworks were destroyed, or incapacitated. There was also considerable damage to irrigation works along Bear Creek and South Boulder Creek, and considerable land was inundated along the lower parts of the South Platte Valley.

The flood reached Sterling early on the morning of September 7th, with an estimated flow of 20,000 second feet, having been augmented by the floods from Bijou Creek and Beaver Creek.

The storage received from this flood probably established a record for amounts impounded by any Colorado flood, as practically all reservoirs were able to store for nearly four weeks, impounding in the aggregate, approximately 150,000 acre feet of flood waters. This long run was due to the exceedingly heavy general rain, followed at intervals by other local rains which released all demand for direct irrigation in the division.

No demand for direct irrigation was made until September 28th, at which time storage was discontinued on the upper Platte river for call by Burlington Canal in District No. 2 for direct irrigation. On September 30th, a call by the Bijou Canal in District No. 1, was received, and orders sent to Commissioners of Districts 2, 3, 4, 5, 6, 7, to close all diversions junior to October 1, 1888.

The latter part of September was clear and warm, which was a very beneficial condition to maturing crops.

The precipitation which exceeded any like period on record, averaged 3.75 inches above normal; the greatest precipitation in any 24-hour period was 5.35 inches at Waterdale on September 2nd. Other places of unusual rates of precipitation in the South Platte basin were as follows:

Arvada	1.17 inches, September 3
Boulder	2.38 inches, September 2
Byers	3.08 inches, September 3
Lake Cheesman	1.05 inches, September 3
Denver	1.05 inches, September 2
Edgewater	1.35 inches, September 3
Estes Park	1.93 inches, September 3
Fort Collins	3.54 inches, September 3
Fort Lupton	3.80 inches, September 3
Idaho Springs	1.35 inches, September 3
Kassler	1.94 inches, September 3
Longmont	3.46 inches, September 3
Parker	1.30 inches, September 3
Sedgwick	1.34 inches, September 2
Waterdale	5.35 inches, September 2
Waterdale	3.22 inches, September 3

Discharge of the various streams will be given in detail in an hydrographic report at a later date.



CHAPTER XVII
ANNUAL REPORTS
OF
IRRIGATION DIVISION
ENGINEERS
FOR
1937-1938

ANNUAL REPORT OF J. E. WHITTEN, SPECIAL DEPUTY
STATE ENGINEER, IRRIGATION DIVISION NO. 1,
FOR YEAR 1937

December 28, 1937

Mr. M. C. Hinderlider,
State Engineer of Colorado,
Denver, Colorado.

Dear Sir:

I herewith present a report of the irrigation administration in Division Number One from July 1 to December 1, 1937. Also included are general reports and observations for the year as a whole. A short dissertation upon the Laramie River condition is also included.

Respectfully submitted,

J. E. WHITTEN,
Special Deputy, South Platte.

ADMINISTRATION IN IRRIGATION DIVISION NUMBER
ONE FROM JULY 1 TO DECEMBER 1, 1937

Orders were changed frequently during July, due to fluctuation of the streams, caused by intermittent rains.

First shortage below date of 1871 was reported on July 23rd, on which date the order was given to upper districts to close to May 1, 1866, for District No. 2 call. This was in effect without change for five days, when rain caused the river to rise, and order was given for priority of date Oct. 5, 1871, and back to May 1, 1866, on August 5th.

On August 12th order was dropped to May 1, 1865. On August 18th a boy drowned in the river below Eleven Mile Canon Reservoir, and the water was shut off to recover the body.

The lowest order reached on the South Platte River was a call by the Brighton Ditch, with date of priority as of December 1, 1863, on August 25th. This order was raised to April 2, 1864, on August 26th; and to May 1, 1865, on August 27th; and to October 5, 1871, on September 5th.

The Burlington Canal, of date April 1, 1864, shut out again on September 23rd and remained on this order until September 27th.

On November 1st, District No. 1 agreed to refrain from inter-district call, thus allowing storage in upper districts if there was no interference within the districts themselves. Storage was accordingly started in the Lower Latham Reservoir of date

June 23, 1898, and continued until November 12th. They were unable to store in District No. 1, due to a call by District 64 for Harmony No. 1 at that time.

Direct irrigation was carried on in most districts to November 15th, and District No. 2 was still irrigating December 1st.

On November 12th, a meeting of water users and water commissioners was held in Denver, to discuss the problem of storage vs. direct irrigation and beneficial use during the fall. It was the general consensus of opinion among those in attendance that beneficial use should be enforced on all direct irrigators in the fall as well as during the growing season, and that irrigation decrees be administered strictly in order of priority, regardless of circumstances.

Storage began in

District No. 4 on November 15th.

District No. 1 on November 17th.

District No. 9 on November 16th.

District No. 2 on November 1st.

The transmountain diversions are becoming more of a problem each year, due to the increasing value of water on the eastern slope, as well as the increasing amount of water being carried from the western to the eastern slope. The Moffat tunnel transmountain diversion has injected many new problems for the administration, and, while the handling of these has been accomplished with very little complaint or censure from our constituents, there are yet some problems relative to the system which we hope to equitably solve during the coming irrigation season of 1938. The influx of water from the Williams Fork River to the South Platte River basin will doubtless increase the administrative burden of this office.

The losses in transit charged to the Moffat Tunnel diversion are as follows:

East Portal to Eldorado Diversion Dam— $21\frac{1}{2}$ per cent.

Eldorado Diversion Dam to Clear Creek—10 per cent.

Clear Creek to Platte River balances Platte Canon to Denver—0 per cent.

Credit at Lake Cheesman equals Clear Creek credit plus $21\frac{1}{2}$ per cent.

Credit at Eleven Mile Canon Reservoir equals Clear Creek credit plus 5 per cent.

Exchange with the South Platte was discontinued July 30th, and the tunnel water was shut off at West Portal August 13th. The maximum amount turned through the tunnel was 335 second feet.

Several dams in the Division were repaired during the fall of 1937. New riprap was placed on the Heart Reservoir Dam in

District No. 1; Pleasant Valley Reservoir Dam in District No. 5 was excavated and backfilled to remedy leaks in the dam; and the Bluebird Dam in District No. 6 was repaired to stop excessive leakage. The only reservoir of consequence to have been built was the Ralston Creek Reservoir, which is part of the Moffat Tunnel transmountain diversion system, owned by the City of Denver.

Precipitation for the year was 10.88 inches in Denver, which, when compared to the normal of 14 inches, shows a deficit of 3.12 inches for the year.

There were few floods in the Division during the past year, and those which occurred were not of impressive magnitude, but were of great benefit to irrigation, as they came at critical times and were beneficially used.

Work has been going on for some time in drilling the Williams Fork tunnel, which is about one-third completed at this time. This tunnel is being drilled by the City of Denver to bring water from the Williams Fork to the South Platte River, for sewage dilution in conjunction with the city sewage disposal plant recently completed.

Due to the inconvenience caused by late irrigation, which prevented many Water Commissioners from having their annual reports in by November 15th as required by law, it was decided at the annual Irrigation Division Engineers' meeting this year to close the books and records as of November 1st in the future to remedy this condition. The irrigation year will then conform to the storage year, which has been arbitrarily set by this office as November 1st to October 31st.

Snowfall on the South Platte watershed is about normal, and this office is advised that prospects for a good runoff from the South Park area are the best in five years.

Storage in the Division is also nearly normal, present indications being that most of the storage space available in all but some junior reservoirs will be filled.

The City of Denver had 70,768 acre feet of water in storage December 1st, which is about one-third of their storage capacity. Generally the outlook for the coming irrigation year seems to be average, and with normal precipitation the coming year the South Platte basin should enjoy a very good irrigation season in 1938.

Very truly yours,

J. E. WHITTEN,

Special Deputy, South Platte.

JEW:EP

ADMINISTRATION OF LARAMIE RIVER IN 1937

There was considerable interest shown by the water users on the Laramie River in Water District No. 48 regarding the measurement of irrigation water.

Seven of the more important ditches in the District were selected for the installation of measuring devices to obtain information relative to irrigation practice in the area. Parshall flumes of treated lumber construction were placed in the seven ditches, and each of said flumes was equipped with an automatic recording instrument. Excellent records were obtained from these recorders for the entire irrigation season, but, due to unavoidable delay in construction of the flumes, irrigation was not started as early as desired, the first day water was drawn being May 15th, which is about two weeks later than irrigation is normally started in District 48. All of the lands irrigated in District No. 48 are meadowlands, from which about one ton of native hay per acre is harvested.

The acreage irrigated by the seven test ditches is 1,112 acres, and the amount of water applied to these lands during the season of 1937 was 13,327 acre feet, or a headgate diversion of 12 acre feet per acre. The headgate diversion of 12 acre feet per acre would seem excessive, but, after consideration of the nature of the terrain, crops and subsoil, this headgate diversion does not seem so far out of line.

The terrain is an important factor. The lands irrigated almost entirely lie in narrow valleys adjacent to the streams, and a considerable portion of the water diverted at the headgate of a ditch returns to the stream very soon as surface flow.

As to crops, it is well known among those experienced in irrigation matters that native hay thrives upon a constantly saturated condition of the soil, a condition which does not obtain with any other crop grown in Colorado or surrounding territory.

The subsoil of the irrigated area of the Laramie River in Colorado is coarse gravel at shallow depths, which is an important factor in the return of water to the streams as sub-surface flow.

While it is difficult to prove the point, it is undoubtedly true that a very large per cent of the water diverted by the aforementioned ditches returns to the stream very soon, leaving but a small part as the actual consumptive use.

Generally speaking, irrigation is over in District 48 by August 1st, although some water is drawn much later by a few small ditches.

TRANSMOUNTAIN DIVERSIONS IN IRRIGATION DIVISION NO. 1 AND INTER-DIVISION, 1937

Transmountain Diversion	Ac. Ft.	From Dist.	To Dist.	Source of Supply	Division Number
Deadman	1,152	48	3	Deadman Creek	1
Laramie-Poudre Tunnel.....	12,297	48	3	Laramie River	1
Skyline Ditch.....	15,697	48	3	Laramie River	1
Sand Creek.....	2,540	..	..
Michigan Ditch.....	2,428	47	3	North Platte River	1
Cameron Pass.....	237	47	3	North Platte River	1
Grand River.....	13,422	51	3	Colorado River	5
Moffat Tunnel.....	21,673	51	6, 7, 2	{ Fraser River } { Colorado River }	5 5
East Hoosier.....	151	36	23	Blue River	5
West Hoosier.....	148	36	23	Blue River	5
Boreas Pass.....	149	36	23	Blue River	5

IRRIGATION DIVISION NO. 1

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL CROP REPORTS FOR THE IRRIGATION SEASON OF 1937 IN ACRES

Dist. No.	Total No. Ac. That Can Be Irrigated	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens	Potatoes
1	188,475	37,651	24,932	52,100	154	159	1,217
2	243,940	38,549	10,207	86,834	306	9,605	8,290
3	388,500	60,755	4,002	62,665	1,902	3,808	31,088
4	161,755	58,320	165	68,380	2,277	1,425	6,217
5	105,835	25,025	6,205	45,745	610	510	750
6	195,335	30,585	63,438	63,515	623	885	185
7	116,086	15,500	1,679	44,171	3,022	14,989	182
8	111,519	9,921	1,638	17,857	258	2,065	100
9	14,673	2,970	2,777	5,443	83	205	2,312
23	48,000	.....	48,000	.....	.....	.....	.....
47 .....	.....	.....	.....	.....	.....	.....	.....
48	4,875	.....	4,875	.....	.....	.....	.....
64	195,285	36,407	30,428	51,486	178	679	3,664
65	7,515	1,140	184	599	68	58	34
Totals.....	1,654,699	316,379	198,208	498,033	9,511	34,323	53,687

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL CROP REPORTS FOR THE IRRIGATION SEASON OF 1937 IN ACRES

Dist. No.	Sugar Beets	Beans	Peas	Cabbage	Corn	Other Crops	Total Irrigated
1	24,808	10,357	.....	57	.....	23,675	175,110
2	34,227	15,466	793	2,516	.....	11,022	217,725
3	52,010	2,780	333	1,220	.....	42,977	263,540
4	8,778	4,104	1,899	868	.....	9,022	161,455
5	14,155	700	330	380	.....	6,115	100,555
6	6,194	388	318	117	.....	6,478	172,726
7	3,233	319	249	854	.....	699	84,897
8	817	415	.....	50	.....	1,583	34,704
9	329	.....	.....	49	.....	405	14,673
23 .....	.....	.....	.....	.....	.....	.....	48,000
47 .....	.....	.....	.....	.....	.....	.....	.....
48 .....	.....	.....	.....	.....	.....	.....	4,875
64	26,331	1,825	.....	.....	11,023	8,704	170,725
65 .....	.....	.....	219	.....	1,052	87	3,441
Totals.....	170,793	36,354	4,051	6,111	12,075	110,767	1,450,292

MOFFAT TUNNEL SUMMARY

Year	Diverted at: East Portal	Eldorado Springs	Eldorado Equivalent or East Portal Less 2 ½ %	Released to So. Boulder Creek	Clear Creek Credit	11-Mile Equivalent or Clear Creek + 5 %
1937	21,673	17,048	21,131	4,083	12,787	13,426

Year	Stored 11-Mile by Exchange	Stored Cheesman by Exchange	Diverted at Intake Exchange	Stored in Ralston Res.	Sales Woman and Ralston Creeks	Sales South Boulder Creek	Direct Benefit to Streams
1937	8,106	3,590	442	1,126	1,610	2,394	3,863

ANNUAL REPORT—DIVISION NO. 1
FOR THE YEAR OF 1938

November 21, 1938.

Mr. M. C. Hinderlinder
State Engineer
State Capitol Bldg.
Denver, Colo.

Dear Sir:

Herein is presented a report on irrigation activities in Division No. 1, for the year of 1938.

Very little water was carried over in storage reservoirs in the fall of 1937, and below normal stream flow did little to build up any appreciable quantity of storage, with the result that the irrigation prospects for the 1938 season appeared very poor at the beginning of the season (March 1), the only encouraging factor being several good snowfalls, on the heads of the streams, which had fallen during the winter. The outlook changed suddenly during the latter days in April when a series of storms began which raised the streams, and gave most of the valley a thorough soaking. This released most direct irrigation demands and storage of water in nearly all reservoirs progressed until May 16th.

The River was under call for direct irrigation until May 22, when another storm caused the river to rise and ditches to shut out, and storage was again allowed with no restrictions. This condition existed until June 3, when demands were made for direct irrigation, and orders were issued to Commissioners accordingly.

An order permitting storage was again issued on June 17, which order prevailed until June 28, when storage was discontinued, water being demanded by senior appropriators, until September 3, at which time storage was unrestricted for a period of about four weeks, to September 28, when senior rights again demanded water. This call lasted until October 10, when most calls were released and storage again started, and is still going on.

There were comparatively few complaints received during the past season and those were, in the main, of trivial character. Several new Parshall rating flumes were ordered installed, and some of these are now under construction.

There were no dam failures in the Division, but repairs or drains were ordered on a few.

The City of Boulder has done some work on the Arbuckle No. 2, and seems to have checked most of the leaks in the concrete arch dam.

An open drain was dug to drain the base of the Pleasant Valley dam in District No. 5, which has given considerable trouble

for several years. When the reservoir is refilled the worth of this drain will be known.

Some new drains were also placed in the Lower Latham dam. New riprap is being placed on the Heart Reservoir dam in District No. 1.

The season, as a whole, was excellent as to irrigation supplies, but the temperatures were very erratic, there having been a deficiency during the early part of the season, and an excess during the latter part. However, the crop yield was good, but the sugar beets are generally below normal, in test, and there was considerable loss of crops due to the excessive precipitation during September.

Transmountain diversions present some very complicated administrative problems, and the past season proved no exception. Although most of the exchanges were effected with little complaint, the almost constant surveillance of the administrative officials was necessary to safeguard the basic principle of exchange. It is to be hoped that many of the difficulties with which the officials are confronted will be lessened as time goes on, both by more efficiency on the part of the officials, and better understanding and cooperation by the water users. A better spirit of cooperation has been shown by water users of District No. 23 the past year than has ever before existed.

The probability of an adequate water supply for the coming season appears to be very good at this time as the storage is about two and one-half times normal, and with an average amount of precipitation the South Platte basin should experience an excellent season this coming year.

Commendation is due the Water Commissioners in the Division for their excellent service and cooperation with this office in administering the decretal orders. The assistance of the employees of the State Engineer's office is also greatly appreciated.

Very truly yours,

J. E. WHITTEN,

Special Deputy, South Platte.

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TRANSMOUNTAIN DIVERSIONS IRRIGATION DIVISION NO. 1 AND INTER-DIVISION 1938

Name of Diversion	Acre Feet Diverted	From District	To District	Source of Supply	First Day	Last Day
Deadman	1,994	48	3	Deadman Creek	May 16	July 5
Laramie-Poudre Tunnel	9,488	48	3	Laramie River	May 13	Aug. 20
Skyline	21,712	48	3	Laramie River	May 1	Sept. 24
Sand Creek including Deadman	6,278	48	3	Sand Creek	May 14	July 5
Michigan	4,936	47	3	North Platte	May 27	Aug. 18
Cameron Pass	448	47	3	North Platte	May 30	July 18
Grand River	25,114	51	3	Colorado River	May 14	Sept. 24
Berthoud Pass	778	51	3	Colorado River	June 30	Aug. 28
Moffat Tunnel	44,201	51	6, 7	Colorado River	April 28	Oct. 20
East Hoosier	501	36	24	Blue River (Colorado River)	May 29	July 8
West Hoosier	157	36	23	Blue River (Colorado River)	May 31	July 2
Boreas Pass	276	36	23	Blue River (Colorado River)	June 3	Aug. 6
Total	115,883					

MOFFAT TUNNEL SUMMARY

	Diverted at East Portal	Eldorado Springs	Eldorado Equivalent or E. Portal less 2½ %	Released to South Boulder Creek	Clear Creek Credit	11-Mile Equivalent or Clear Creek +5 %
1937	21,673	17,048	21,131	4,083	12,787	13,426
1938	44,201	36,618	43,652	4,860	16,466	17,289

	Stored 11-Mile by Exchange	Stored Cheesman by Exchange	Diverted at Intake Exchange	Stored in Ralston Res.	Sales Woman and Ralston Creeks	Sales South Boulder Creek	Direct Benefit to Streams
1937	8,106	3,590	442	1,126	1,610	2,394	3,863
1938	9,372	6,989	0	20,152	0	0	5,018

The following is a statement of water in storage in Division No. 1, from May 1 to November 1, 1938, tabulated by districts. Does not include North Park District No. 47, nor the Laramie River Basin District No. 48, as there is very little storage in either of these districts.

J. E. WHITTEN, Special Deputy.

Acre Feet in Storage—Division No. 1, 1938.

Dist. No.	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1
1	88,791	123,351	106,678	70,317	25,264	57,313	51,855
2	35,632	69,392	64,863	49,223	19,288	44,079	49,549
3	53,037	82,973	117,815	89,353	39,241	62,592	73,000
4	19,440	32,974	42,175	32,909	16,688	33,651	41,100
5	14,843	27,772	30,194	25,098	15,771	29,512	29,957
6	22,077	36,397	38,180	34,447	25,553	27,500	28,350
7	2,171	*15,300	*15,300	*11,990	*11,450	*12,000	*12,000
8	17,594	18,075	18,101	16,739	13,685	14,500	15,000
9	7,419	7,516	6,705	5,772	4,043	4,592	4,451
23	62,353	81,000	102,716	108,572	104,279	130,638	133,688
64	70,612	96,661	82,069	60,064	24,641	60,434	64,779
Totals	393,969	581,411	614,796	494,484	299,903	476,811	503,729
City of Denver ..	79,950	108,575	130,817	135,321	128,071	152,019	157,900
For Irrigation	314,019	482,836	493,979	369,163	171,832	324,792	345,829

*Includes Ralston Creek Reservoir.

TWENTY-NINTH BIENNIAL REPORT

CROP REPORT, IRRIGATION DIVISION NO. 1, 1938

Dist. No.	Total Acres That Can Be Irrigated	Ac. Ft. Used	Alfalfa	Natural Grass	Cereals	Orchards	Market Gardens	Potatoes	Sugar Beets	Beans	Peas or Corn	Cabbage Crops	Other Crops	Total Irrigated
1	..... 193,335 Mar. 5-Oct. 31	364,511	40,206	26,471	59,414	154	132	1,486	16,722	11,163	....	92	20,372	176,212
2	..... 237,755 Mar. 1-Oct. 31	430,183	40,225	10,297	87,518	306	10,020	7,914	32,967	15,380	730	2,790	8,774	216,921
3	..... 388,540 Apr. 13-Oct. 31	350,111	57,430	4,062	65,347	1,758	2,993	25,863	43,540	4,102	172	1,314	56,959	263,540
4	..... 141,430 Feb. 2-Oct. 31	212,106	40,170	1,205	66,100	1,855	880	6,690	9,065	2,910	2,245	390	6,000	137,510
5	..... 105,835 Apr. 10-Oct. 11	106,227	28,610	5,625	44,480	630	550	1,050	11,615	800	390	1,070	6,935	101,755
6	..... 195,335 Apr. 25-Oct. 24	111,045	29,763	63,175	61,960	623	981	138	5,582	365	245	96	10,240	173,168
7	..... 116,276 Mar. 30-Nov. 5	119,439	14,240	1,684	48,391	3,022	13,976	187	2,128	324	264	984	684	86,484
8	..... 111,801 Apr. 1-Oct. 31	99,370	11,162	2,368	18,139	273	2,093	50	681	125	....	....	1,017	35,908
9	..... 14,854 Mar. 10-Oct. 31	34,674	3,344	2,775	5,484	78	242	250	318	285	2,009 (corn)	59	10	14,854
23	..... 48,000 ± 47	.....	.....	48,000	.....	Report all natural grass			.....	1,850	13,265	1,443	8,099	172,077
48	..... 4,875 ± Apr. 23-Sep. 25	46,958	.....	70,000	.....	Report all natural grass			.....	....	(corn)	(cane)	42	70,000
64	..... 195,625 Mar. 12-Nov. 15	299,127	33,644	30,686	55,416	178	682	3,422	23,392	....	1,035	362	42	4,555
65	..... *8,086 Apr. 5-Nov. 3	11,498	939	428	260	42	91	16	110	....	(corn)	....	....	**3,325
Totals	1,831,747	2,185,249	299,733	271,331	513,109	8,919	32,640	47,066	146,120	37,304	20,355	8,600	119,132	1,504,309

*5,000 acres in Nebr.

**1,873 acres in Nebr.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER OF IRRIGATION DIVISION NO. 2 FOR THE SEASON OF 1937.

February 7, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

The winter of 1936-37 was quite cold, the Arkansas River was frozen over and as ice conditions seriously interfered with direct irrigation we were able to fill the senior reservoirs and also to allow some storage in those with junior decrees.

The spring opened up favorably to the farmers as the soil was moist for plowing and seeding. The precipitation was normal up to May first when a drought set in and continued through the summer months, and materially affected the yield under many ditches. Normally sixty-seven per cent of the yearly moisture falls during the growing months of April, May, June, July, and August, when it is most needed. This season it failed to appear to the great detriment of growing crops.

Under the older ditches crops were good, but under junior ditches they were poor.

The following tabulation gives the precipitation in inches by months, beginning with November 1, 1936. This shows the lack of rainfall during the growing months:

Nov. 1936	Dec. 1936	Jan. 1937	Feb. 1937	Mar. 1937	Apr. 1937	May 1937	June 1937	July 1937	Aug. 1937	Sept. 1937	Oct. 1937	Total
0.21	0.34	0.18	0.60	0.77	0.84	0.70	0.51	0.68	1.02	0.35	0.48	6.68
Average:												
0.36	0.50	0.31	0.47	0.59	1.31	1.50	1.36	1.94	1.86	0.75	0.68	11.67

On May first the rainfall was up to 83 per cent of the average. By September first it had fallen to 57 per cent.

The winter snowfall had a water content of 3.51 inches. The average water content is 4.05 inches and the runoff from the snow water was correspondingly short.

The flow of the Arkansas River through Pueblo was 382,400 acre feet or 73 per cent of the average. This includes some 58,158 acre feet transmountain and reservoir water. The average flow is 523,300 acre feet.

No city or town suffered from lack of water in 1937, as there was enough for all domestic needs.

The amount in storage reservoirs on May 1, 1937, was 125,755 acre feet. Of this water 11,465 acre feet were decreed for manufacturing purposes and 3,639 acre feet were for domestic use. This left 110,655 acre feet for irrigation. A portion

of this water is unavailable in the reservoirs as it cannot be drawn out. The average in storage on May 1st is 198,000 acre feet.

On November 1, 1937, there were 60,296 acre feet in storage. Of this amount 10,300 acre feet are for manufacturing purposes and 2,674 acre feet for domestic use. The average annual amount in storage for November 1st is 170,000 acre feet. The reservoir water for irrigation purposes was practically exhausted on November 1st, with but little carryover.

The seven transmountain ditches brought over a total of 42,074 acre feet, nearly all of which was used for irrigation this season.

A total of 65,064 acre feet of transmountain and reservoir water was run to the ditches near Pueblo and east of here. A carrying charge of 8,245 acre feet was made on this water so that only 56,819 acre feet was delivered to the ditches. Transmountain water plays an important part in the irrigated agriculture of the Arkansas Valley.

Yours truly,

C. W. BEACH,
Division Engineer Irrigation Division No. 2.

Tabulated Statement of Water Commissioners' Annual Crop Reports for the Irrigation Season of 1937

Number of District	Amount Appropriated in Cubic Feet per Second		Capacity of Ditches in Cubic Feet per Second	Length of Main Ditches in Miles	Length of Laterals in Miles	Market Gardens										Orchards										Cereals										Alfalfa	Number of District																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	1	2				3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
10	615.19	1,155.57	1,308.57	1,355.5	1,355.5	March 1	Nov. 30, 1936	211	138	4,737	153.6	32,913.50	25,900	42,473	39,778	39,778	117,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,856	113,

IRRIGATION DIVISION NO. 2
Tabulation Showing Amount in Storage in Major Reservoirs, 1937
Amounts in Acre-Feet

Water District	Name of Reservoir	Dec. 1936	Jan. 1937	Feb. 1937	Mar. 1937	Apr. 1937	May 1937	June 1937	July 1937	Aug. 1937	Sept. 1937	Oct. 1937	Nov. 1937
10	Fountain No. 1	2,571	3,000	3,894	4,898	4,898	5,076	3,894	3,428	1,622	532	912	912
10	Fountain No. 2	59	95	95	8	8	164	95	95	44	44	8	14
10	Spring Run No. 2	383	600	599	580	600	600	449	220	23	23	0	0
10	Calahan	155	308	309	308	308	227	227	115	46	0	0	0
10	Cheyenne Mt.	447	447	447	447	447	404	404	404	122	24	38	38
10	Monument	7,909	7,909	7,909	7,909	7,909	5,106	4,363	16,712	6,130	2,332	2,493	2,493
11	Sugar Loaf	17,368	17,368	17,368	17,368	17,368	14,614	18,484	16,712	10,898	8,135	8,996	8,557
11	Twin Lakes	17,368	17,368	17,368	17,368	17,368	14,614	18,484	16,712	10,898	8,135	8,996	8,557
11	Clear Creek	870	467	467	467	467	467	2,651	3,597	2,291	0	0	0
11	Skagway	2,363	2,363	910	377	66	474	456	3,290	1,155	310	574	718
12	Mount Pisgah	2,686	2,686	2,686	2,686	2,686	2,192	2,070	1,977	1,824	1,316	1,593	1,047
12	Brush Hollow	1,713	2,000	1,889	2,948	2,948	2,952	1,426	1,228	75	75	91	91
12	City Colorado Springs	4,597	4,637	4,252	3,243	2,756	2,791	3,126	2,878	2,634	2,298	1,766	1,826
13	Deweese-Dye	3,222	3,712	4,222	4,222	4,222	3,890	3,112	2,896	1,818	1,957	1,237	1,109
14	Teller	1,002	977	953	1,305	1,228	890	5,517	2,833	27	859	1,400	1,062
14	Lake Henry	2,705	4,617	5,916	6,011	5,814	4,617	3,597	3,597	2,868	2,343	2,137	1,662
14	Lake Meredith	0	0	0	1,274	0	0	0	0	0	0	0	0
15	Beckwith	0	386	466	466	466	466	0	153	63	37	37	38
15	Minnequa	1,278	1,302	1,274	1,274	1,258	1,236	1,293	1,197	1,235	1,258	1,156	1,146
15	Dye	2,750	2,762	2,337	2,744	2,781	2,625	2,759	2,686	2,691	2,756	2,654	2,679
15	C. F. & I. No. 2	2,505	2,481	1,767	1,796	1,353	1,095	1,434	1,436	1,758	1,959	2,295	3,272
16	Coler	323	497	681	681	2,139	2,165	1,709	1,431	982	1,397	497	497
16	Cucharas	27,077	26,240	26,240	26,240	23,332	25,200	20,510	16,396	12,130	4,340	6,370	4,588
16	Bradford	0	0	0	0	0	0	0	0	0	0	0	0
16	Huerfano Valley	0	0	0	1,785	1,557	1,699	1,128	646	0	0	225	0
16	Crane Holmes No. 1	731	731	731	731	547	547	496	496	445	445	445	445
16	Lindsley Lake	50	67	111	111	111	111	111	50	50	50	8	8
16	Holita	18	18	18	18	4	4	4	4	0	0	0	0
16	Valdez	18	18	18	18	1,598	1,291	1,007	985	629	657	733	650
16	Dotson	18	18	18	18	2,648	2,648	1,189	0	0	0	321	386
17	Dye	1,424	1,248	1,548	2,683	2,648	2,648	1,262	0	664	602	695	27
17	Holbrook	1,561	2,948	3,670	3,932	3,670	3,615	1,562	855	664	0	695	27
17	Horse Creek	7,941	8,086	8,086	8,144	7,633	7,294	5,777	2,881	0	426	578	0
17	Adobe	2,009	2,009	2,009	1,485	1,797	1,485	0	2,693	0	0	913	0
18	Seven Lakes	0	0	0	0	0	0	0	0	0	1,535	1,150	1,150
18	Model	1,629	2,771	2,771	2,771	2,418	1,754	0	5,225	0	1,537	3,349	2,672
19	Hermosa	254	254	254	254	254	264	133	1,133	860	0	133	133
19	North Lake	808	854	848	814	810	848	860	860	860	860	860	848
67	Nee No Shee	0	0	0	0	0	0	0	0	0	0	0	0
67	Nee Gonda	0	0	0	0	0	0	0	0	0	0	0	0
67	Nee Sopah	0	0	0	0	0	0	0	0	0	0	0	0
67	Nee Skah	33,657	33,924	32,190	31,824	30,426	28,656	24,109	24,332	25,929	22,105	24,599	23,215
67	Two Buttes	0	0	0	0	469	173	0	0	0	0	0	0
67	Thurston	0	0	0	0	0	0	0	0	0	0	0	0

*No Report.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER OF IRRIGATION DIVISION NO. 2 FOR THE SEASON OF 1938

December 1, 1938.

M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

The winter season of 1937 and 1938 was not supplied with much moisture. The Arkansas River flow was about sixty per cent of average. The season and runoff were such that but a small amount of reservoir water was captured. Practically no reservoir water was carried over from the year 1937 so some of the canals did not have reservoir water to assist in starting their crops.

The spring opened up favorable to the older canals. They were able to get crops started in good shape. The precipitation was a little above normal during the spring months. The following tabulation shows the amount of precipitation received as compared to the average:

Nov. 1937	Dec. 1937	Jan. 1938	Feb. 1938	Mar. 1938	Apr. 1938	May 1938	June 1938	July 1938	Aug. 1938	Sept. 1938	Oct. 1938	Total In.
0.19	1.11	0.62	0.70	1.32	1.63	1.77	0.79	1.61	2.03	1.80	0.17	13.74
Average:												
0.36	0.50	0.31	0.47	0.59	1.31	1.60	1.36	1.94	1.81	0.75	0.66	11.66

Water conditions were favorable throughout the season with the exception of a short dry period during the month of August.

The snowfall had a water content of 5.35 inches. The average water content for the past 25 years is 4.10 inches. The melting snow furnished a very good runoff during May and June. The rainfall during the five growing months was a little below the average.

The season was particularly favorable for the propagation and growth of insects that prey upon crops. Grasshoppers were prevalent over the entire irrigation division and aphids were bad in the melon growing sections. The insects took a heavy toll on the yield of crops. There were no destructive storms and but little damage from hail during the growing season.

The flow of the Arkansas River through Pueblo amounted to 456,000 acre feet for the irrigation year, of this amount 42,331 acre feet was reservoir and trans-mountain water. The average flow at this point is 523,300 acre feet. The flow through Pueblo was 12.8% short of the average.

The amount of water in storage on May 1st amounted to 65,687 acre feet, and the average for May 1st for the past 13

years is 141,919 acre feet. Of the amount in storage some 1,883 acre feet was for domestic use, and 11,023 acre feet for manufacturing purposes.

The amount in storage on November 1, 1938, amounted to 129,841 acre feet and the average amount in storage for the past 13 years is 107,969 acre feet. Of this amount some 6,577 acre feet was for domestic use and 16,522 acre feet for manufacturing use. The remainder was for irrigation purposes.

A total of 60,011 acre feet of trans-mountain water was brought over to the eastern slope for irrigation purposes during the 1938 season. Much of this has been used for irrigation but some has been held in storage for use during the 1939 season.

A total of 46,428 acre feet was run to canals for irrigation from trans-mountain ditches and from mountain reservoirs and a charge of 5,172 acre feet was made for using the river as a carrier of this water.

Yours truly,

C. W. BEACH,

Division Engineer, Irr. Div. No. 2.

Tabulated Statement of Water Commissioners' Annual 'Crop Reports for the Irrigation Season of 1938

Number of Water District	1	2	3	4	5	6	7	8	9	10	11	12	13
Amount Appro- priated in Cubic Feet per Second	10,000	6,49.14	1,306.37	327.75	.....	Jan. 12	Nov. 10	297	137	4,899	165.96	47,566.94	22,479
Capacity of Ditches in Second Feet	11,000	1,275.5	1,306.37	327.75	.....	March 1	Oct. 31	297	137	4,899	165.96	47,566.94	22,479
Length of Main Ditches in Miles	12,000	1,209.88	474	101.6	.....	Nov. 1, 1937	Oct. 31, 1938	297	137	4,899	165.96	47,566.94	22,479
Length of Laterals in Miles	13,000	1,490.68	.....	266.25	.....	April 1	Sept. 30	365	45	2,675	375.60	379,654	38,684
Number of Acres Irrigated	14,000	1,996.85	2,116	268.00	.....	Nov. 1, 1937	Oct. 31, 1938	351	70	28,158	504.14	46,807	29,948
	15,000	1,231.9	5,270.1	85.05	.....	Jan. 1, 1937	Oct. 31, 1938	304	72	.....	202.7	33,181	117,359
	16,000	5,482.76	5,098.32	629.01	.....	Nov. 1, 1937	Oct. 31, 1938	304	72	.....	431.88	71,769.64	13,310
	17,000	7,169.39	7,169.39	501	.....	Nov. 1, 1937	Oct. 31, 1938	302	40	18,813	2,224	486,578	113,472
	18,000	5,967.85	334.01	36.5	.....	May 5	Aug. 31	330	58	16,536	98	5,551	15,771
	19,000	1,857.97	374.78	34.78	.....	Oct. 31, 1937	Oct. 31, 1938	322	116	13,804	504	224,394	56,563
	20,000	3,412.66	188.5	224.5	.....	Nov. 1, 1937	Oct. 31, 1938	322	116	13,804	504	224,394	56,563
Totals	18,871.15	18,613.70	2,931.14	2,931.14	.....			365	610	131,313	6,096.76	1,285,191.58	573,695
Number of District	14	15	16	17	18	19	20	21	22	23	24	25	26
Alfalfa	2,218	3,172	4,395	7,175	28	335	207	.....	44	1,000	11,654	2,456.00	8,670.00
Natural Grasses	5,066	15,694	7,175	7,175	111	895	164	82	1,559	688	32,142	.....	4,950.00
Orchards	5,343	2,303	6,481	3,561	.....	7	107	223	270	1,255	20,707	.....	436.00
Cereals	2,970	17,662	1,811	12	9	12	107	75	123	1,255	23,018	.....	8,915.80
	34,688	4,704	21,580	322	2,658	9,357	11,769	1,049	9,489	7,404	103,030	14,156.00	17,958.52
	2,966	2,966	2,966	8	8	8	58	.....	1,919	1,628	8,196.5	.....	3,763.00
	2,555.5	2,419	2,966	109	62	.....	619	.....	1,919	1,628	42,273	5,520.13	12,881.05
	17,267	7,428	13,240	109	3	.....	12,212	125	4,908	16,047	158,416	13,220.00	16,624.00
	55,350	2,602	65,589	375	1,135	.....	2,212	.....	4,908	16,047	158,416	13,220.00	16,624.00
	705	50	715	3	115	.....	.....	.....	4,675	5	1,478	.....	6,365.00
	4,416	4,301	7,646	25	102	.....	2,409	.....	111	1,862	23,555	2,985.00	8,990.00
	21,559	2,046	17,826	33	12,292	.....	2,409	.....	111	17,914	62,217	20,035.80	20,447.00
Totals	151,577.50	61,381	149,424	4,588	28,120	22,473	47,830	486,686	558,429.93	80,779.55	\$59,878.80	18,526.00	

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER OF IRRIGATION DIVISION NO. 3, FOR 1937

Alamosa, Colorado, November 29, 1937

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado

Dear Sir:

Conforming to the statutes, I hand you herewith my annual report covering Water Commissioners' reports on reservoirs, ditches and crops in Irrigation Division No. 3, together with comments on crop yields, water supplies, snowfall precipitation and climate conditions, and other matters pertinent to my Division.

Yours very truly,

WALTER D. CARROLL,
Irrigation Div. Engineer, Division No. 3

WATER COMMISSIONERS' CROP AND DITCH REPORT

Water District No.	No. Priorities Reported	First Day Water Was Used	Last Day Water Was Used	Maximum No. Days Diverted from Streams
20.....	419	March 15	November 22	237
21.....	76	March 13	November 21	252
22.....	187	March 15	November 10	242
24.....	98	April 1	October 31	214
25.....	96	April 1	November 15	240
26.....	116	April 1	November 3	209
27.....	77	March 11	November 14	250
35.....	70	April 1	October 15	187

Water District No.	No. Acre Feet Used by All Ditches from Natural Streams	Total No. of Acres That Can Be Irrigated	No. of Acres of Alfalfa	Natural Grasses
20.....	442,015	411,253	37,019	52,153
21.....	102,371	66,751	4,712	13,425
22.....	310,355	178,129	10,060	30,070
24.....	73,842	24,394	5,200	8,457
25.....	69,620	60,666	1,840	24,326
26.....	35,728	46,961	2,702	15,365
27.....	10,655	8,730	697	2,615
35.....	65,933	34,304	3,062	11,550
Totals	1,110,519	831,188	65,292	157,961

WATER COMMISSIONERS' CROP AND DITCH REPORT —Continued

Water Dist. No.	Cereals	Pastures	Market Garden Peas	Potatoes	Beans
20	51,607	136,450	1,522	43,445	1,032
21	7,413	10,088	2,665	5,616	708
22	20,735	16,600	688	3,493	943
24	6,600	14	2,294	571	1,514
25	382	9	....	81	....
26	552	6,726	....	132	....
27	130	912	33	276	20
35	3,118	2,233	704	185	208
Totals	90,537	173,032	7,906	53,799	4,425

Water Dist. No.	Field Peas	Cabbage	Sugar Beets	Sweet Clover	Lettuce	Other Crops
20	19,974	....	1,450	27,772	....	9,432
21	3,625	266	....	2,669	....	1,423
22	7,178	170	575	4,240	....	....
24	7,398	180	868	....	....	3,173
25 .....	....	....	....	....	....	....
26 .....	....	....	....	....	....	....
27	385	....	....	....	10	510
35	1,273	465	38	....	....	56
Totals	39,833	1,081	2,931	34,681	10	14,594

Water District No.	Total Acres Irrigated	Cost of Administra- tion Water Comm'rs and Deputies	Cost of Superintendence	Cost of Repairs	Cost of Improvements
20	381,856	\$ 2,670.00	\$ 2,270.00	\$ 2,610.00	\$ 3,520.00
21	52,610	1,938.00	....	....	....
22	94,752	1,518.00	150.00	180.00	500.00
24	36,269	1,935.00	2,065.00	1,415.00	200.00
25	26,638	1,697.00	....	2,005.00	....
26	25,477	1,452.00	....	....	....
27	5,588	1,374.00	....	....	....
35	22,892	996.00	....	....	....
Totals	646,082	\$13,580.00	\$ 4,985.00	\$ 6,210.00	\$ 4,220.00

COMPARISON OF TOTAL ACRES IRRIGATED

1932	705,781
1933	660,934
1934	638,766
1935	755,724
1936	663,724
1937	646,082

COMPARISON OF COST EXPENSE—5-YEAR-PERIOD

1932	\$12,376
1933	11,427
1934	13,251
1935	13,893
1936	11,690
1937	13,580

WATER COMMISSIONERS' RESERVOIR REPORT

Water District No.	Capacity in Acre Feet in All Reservoirs	Quantity of Water in Acre Feet in Reservoirs May 1	Quantity of Water in Acre Feet in Reservoirs Nov. 1	First Day Water Used from Reservoirs	Last Day Water Used from Reservoirs	Maximum No. Days Water Used from Reservoirs	Total No. Acre Feet Water Used from Reservoirs
20.....	134,077	31,516	*8,309	June 18	Sept. 2	76	64,918
21.....	31,752	9,949	2,836	June 17	Oct. 22	138	15,700
22.....	9,710	4,944	Dry	June 1	Oct. 1	155	5,260
24.....	112,563	20,459	17,214	April 3	Nov. 1	200	39,563
35.....	25,483	13,042	7,701	April 21	Oct. 10	169	23,806
Totals...	313,585	79,910	36,060				149,247

(*Note: Of the 8,309 acre feet in storage Nov. 1, only 4,229 is available for irrigation, the balance being in fish ponds.)

COMPARISON ACRE FEET CARRIED FROM RESERVOIRS

COMPARISON OF TOTAL ACRE FEET IN RESERVOIRS

		May 1	Nov. 1
1932	147,101	41,488	42,211
1933	97,058	56,875	29,080
1934	62,391	47,489	11,067
1935	102,537	28,216	64,361
1936	111,607	84,419	43,294
1937	149,247	79,910	36,060

AMOUNT OF WATER, IN ACRE FEET, IN STORAGE, ON FIRST DAY OF EACH MONTH, FROM DEC. 1, 1936 TO NOV. 1, 1937

	Rio Grande Reservoir Cap. 51,113	Santa Maria Reservoir Cap. 42,000	Continental Reservoir Cap. 26,716	Sanchez Reservoir Cap. 103,155
12-1-1936	7,466	4,299	528	12,467
1-1-1937	9,660	5,070	528	12,750
2-1-1937	10,707	5,911	528	12,582
3-1-1937	12,180	6,619	528	12,353
4-1-1937	13,699	7,359	528	12,930
5-1-1937	16,190	9,514	528	17,600
6-1-1937	44,287	19,071	2,272	26,030
7-1-1937	42,860	20,850	2,165	28,821
8-1-1937	17,652	9,778	1,347	20,882
9-1-1937	284	3,265	825	15,562
10-1-1937	Dry	3,094	674	14,776
11-1-1937	Dry	3,128	674	15,279

	Terrace Reservoir Cap. 17,700	La Jara Reservoir Cap. 19,150	Mountain Home Reservoir Cap. 19,150	Smith Reservoir Cap. 6,212
12-1-1936	4,743	1,600	4,900	5,336
1-1-1937	4,597	1,451	5,301	5,336
2-1-1937	4,527	1,890	5,562	5,336
3-1-1937	4,499	1,800	5,830	5,336
4-1-1937	4,429	1,800	6,162	5,336
5-1-1937	4,516	5,433	8,706	5,336
6-1-1937	14,782	7,960	13,426	5,336
7-1-1937	13,912	6,224	15,529	5,336
8-1-1937	9,362	4,718	11,106	4,367
9-1-1937	3,437	2,836	6,243	2,400
10-1-1937	232	2,836	5,379	2,140
11-1-1937	Dry	2,836	5,301	2,400

WATER COMMISSIONERS' RESERVOIR REPORT

—Continued

		Cove Lake Reservoir Cap. 9,710	Salazar No. 1 Reservoir	Salazar No. 2 Reservoir		
12-1-1936	.....	947	....	....
1-1-1937	.....	732	....	....
2-1-1937	.....	655	....	....
3-1-1937	.....	0	....	....
4-1-1937	.....	0	....	....
5-1-1937	.....	4,944	40	Dry	
6-1-1937	.....	5,260	....	....
7-1-1937	.....	4,590	....	....
8-1-1937	.....	1,716	....	....
9-1-1937	.....	113	....	....
10-1-1937	.....	13	....	....
11-1-1937	.....	Dry	80	20	
		Archuleta Reservoir Cap. 97	Hunters Lake Res. Cap. 48	Spruce Lake Res. No. 1 Cap. 88	Spruce Lake Res. No. 2 Cap. 93	
May 1	97	Dry	88	93	
Nov. 1	Dry	Dry	88	93	
		Dude Ranch Reservoir Cap. 125	Road Canon Reservoir Cap. 2800	Poage Reservoir Cap. 260	Lost Lakes Reservoir Cap. 1066	
May 1	125	2,800	Dry	350	
Nov. 1	125	2,800	Dry	Dry	
		Shaw Reservoir Cap. 638	Bristol Head Res. No. 1 Cap. 153	Bristol Head Res. No. 2 Cap. 824	Beaver Park Reservoir Cap. 4434	
May 1	638	Dry	Dry	2,020	
Nov. 1	195	Dry	Dry	Dry	
		Regan Lake Reservoir Cap. 1200	Chenoweth Reservoir Cap. 40	Eastdale Res. No. 1 Cap. 3468	Eastdale Res. No. 2 Cap. 3047	
May 1	200	40	2,859	Dry	
Nov. 1	200	40	822	Dry	
		Goin's Lake Reservoir Cap. 40	Humphries Reservoir Cap. 842	Trout Lake Reservoir Cap. 198	Wright's Lake or Spring Creek Res. Cap. 120	
May 1	40	842	198	120	
Nov. 1	Dry	842	Dry	Dry	
		Ruby Lake Reservoir Cap. 120	Hermit Lake Res. No. 1 Cap. 423	Hermit Lake Res. No. 2 Cap. 360	Grace Lake Reservoir Cap. 605	
May 1	120	423	360	605	
Nov. 1	Dry	423	360	605	
		Sowards Lake Reservoir Cap. ..	Bergey Lake Reservoir Cap. 30	Goose Creek Reservoir Cap. 231	Wee Ruby Reservoir Cap. 90	Brown Lake Reser- voir or Troutvale Cap. 510
May 1	200	30	231	84	510
Nov. 1	Dry	Dry	Dry	Dry	438

Potatoes

The acreage of potatoes was normal for 1937 but the yield was only 50% of normal. Ten thousand cars were harvested, 3,167 cars have gone out via railroad and trucks, 6,000 cars still in storage.

There was some loss due to psylla, but the most damage was caused by extreme heat at the time the tubers were setting on and to some extent by shortage of water for irrigation and the absence of rain.

There was very little blight but considerable loss was due to a condition after the tubers had practically matured, they became soft and spongy and unfit for the market.

Spraying against psylla has been more generally adopted, 8,000 acres having been sprayed this season with outstanding results. However, only two growers qualified for the 600 Bushel Club.

The price averaged around 75c per cwt. Demand is good. The government is taking a large quantity of U. S. No. 1 at market price and some culls at 25c and pays a bonus for the ones fed to livestock.

Market Garden Peas

There was a marked increase in acreage in this crop. The yield was 95% of normal but the market was very poor. Starting out at 21¼c per pound, it dropped to 2c where it stood until the close of the season. Through the efforts of the Marketing Ass'n and the help of the Federal Government agencies, who took 250 car loads in an attempt to stabilize price and demand, the price was held regular all season. There were 568 straight car loads shipped.

There was a total of 1,927 cars of all kinds of vegetables which was an increase over 1936.

Head Lettuce

The acreage of head lettuce was normal but yield was not more than 60% due to excessive heat and shortage of water for irrigation, tip burn and blight.

The average price throughout the season was 60c per crate which was satisfactory.

There were 166 straight cars shipped during the season.

Sugar Beets

At the close of the harvest of sugar beets in the Valley, it was disclosed that 351 carloads of beets had been shipped to the factory. The average sugar content was 18%, which is higher than those grown in any other place in the State.

While the Valley sugar beets have always been known to have a heavy sugar content, the beets this year had an unusually high average.

The average for the State is reported to be 14%.

The yield was about normal, some plots produced 20 tons per acre.

Wheat

The acreage and yield of wheat is normal and condition of grain excellent. There was no disease. The yield is 20 bushels per acre and the price of \$1.65 for early delivery was very satisfactory, but is now holding around \$1.25 per cwt.

Mixed Car Lots of Vegetables

These shipments contained all the various products raised in the Valley, and were made up of spinach, cauliflower, lettuce, market garden peas, broccoli, snap beans, carrots, turnips and cabbage. These shipments were made early in the season before straight carloads began to move, and brought very satisfactory prices. Three hundred thirty-six cars shipped. There were 20 carloads of spinach shipped out, while the canning factory at La Jara was able to take a large quantity for their packing plant. Five cars carrots were shipped.

Cabbage

The acreage was 80% of normal while the yield was normal. There was very little trouble with worms and the quality was excellent but the price of \$6 to \$7 per ton was a disappointment to growers who received as high as \$60 per ton last season. There were 139 straight cars shipped.

Field Peas

The acreage of this crop is only 60% of normal and the yield 80%.

The shortage in acreage is due to the growers experimenting with other cereal crops, such as corn which produces more grain and a better forage crop. Corn is producing 25 bushels per acre. A high altitude strain of corn is proving very satisfactory. Fifteen hundred acres grown.

The reason for the light yield in peas is due to black leg, a form of blight which attacks and rots the roots. Experiments with different sprays has met with very indifferent success; while the treatment results in better stands, it is not effective in eradicating the black leg.

The price of peas for seed is around 5c per pound.

Oats and Barley

The yield and acreage of these crops is normal with only local demand. Price ranges around \$1.00 per cwt.

Sweet Clover

This crop is still very popular among the Valley farmers as a soil builder as well as a good money crop where used as forage or for seed.

There was considerable increase in acreage, more seed has been saved and with a price of 7c a pound for seed, it brings good money as well as being a good soil builder. The soil conservation projects are paying the farmer a bonus for seeding to sweet clover on the same basis as is paid for seeding to alfalfa.

Alfalfa

The acreage of this crop is normal but the yield is only 90%. This shortage is due mostly to drouth, as many fields only produced one cutting.

Due to the soil conservation program there was a 10% increase in acreage.

The price is \$6 to \$8 per ton but demand is very light due to the mild fall season and to the abundance of feed throughout the territory where the crop is usually marketed.

Cauliflower

The acreage of cauliflower was only 50% of normal while the yield was 90%. The loss of acreage was due to a June freeze which killed many plants at a time when they could not be replaced.

The price started out at \$1.25 per crate but later dropped to 25c when the Marketing Association declared a moratorium to prevent a further drop, which brought the price of late shipments to 75c per crate, which makes the growers good money. Six hundred seventy-five straight cars shipped.

Snow Report

Snow reports for the year 1936-37 at Cumbres was 420 inches, while the average for 28 years was 280 inches.

The snowfall on the West range was somewhat over normal, from Cumbres as far north as the Rio Grande watershed, with less than normal north to Saguache, while the fall on the East range was very light. However there were some heavy rains on the west slope of the Sangre de Cristo range, during the summer, which gave the farmers the needed moisture to mature crops and a good storage in reservoirs.

While the snowfall appeared to be adequate for a good run-off in the streams, it failed to materialize when needed during the summer. Water in many junior priorities was shut off in June and early July and many crops under these ditches suffered.

Resettlement

This Federal project provides the construction of buildings for 120 units of 80 acres each and consists of a 4-room dwelling (several 6-rooms), and a large barn, chicken house, store house, all fenced, brush cleared ready for plow, ditched and an artesian well.

There are 40 units now ready and farmers from the dust bowl in southeastern Colorado are being located on these completed units.

A 4,000 acre community pasture will be available for use of the community and a community building 75x150 is being constructed for school and social hall, with a capacity of 250 school children.

The farms are sold on a 40-year payment plan. Financial help will be given for the first year for seed and living expenses.

Betterments and New Construction

Work on the valves on the Terrace Reservoir is under way. The gaskets (bronze rings) became impaired and allowed a leakage which caused loss of considerable water during the 1936-37 season and the condition was not safe. The valves have been taken out and new gaskets put in.

The Cove Lake Reservoir has increased the capacity of the spillway to take care of any unusual flood.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER OF IRRIGATION DIVISION NO. 3 FOR THE SEASON OF 1938

Alamosa, Colorado, November 29, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

I herewith submit my annual report for the year 1938.

With a snowfall of considerably above normal and soil moisture in excellent condition for seed germination, the outlook for a good season was very encouraging. However, the usual let-down in stream flow during the latter part of July and early August, resulted in considerable damage to row crops, especially to early planting of vegetables.

September brought relief with general rains throughout the district and in the high area, which resulted in a good supply of water in the streams and a good fill in all reservoirs.

The carry-over of storage water, as of November 1, is 82,051 acre feet, which is unusual, and is due to the heavy rains in the high area, as well as throughout the entire division, resulting in the closing down of most ditches and making available for storage the run-off of the streams.

A heavy frost during the latter part of July caused considerable damage to vegetable crops and alfalfa.

Yields were very satisfactory on all crops except potatoes, which was not more than one-third of normal. Prices on grains and hay are very low.

Very truly yours,

WALTER D. CARROLL,
Irrigation Division Engineer, Division No. 3.

WATER COMMISSIONERS' CROP AND DITCH REPORT— 1938

Water District No.	No. of Priorities Reported	First Day Water Was Used	Last Day Water Was Used	Maximum No. Days Diverted from Streams
20.....	419	March 1	November 24	245
21.....	76	March 11	October 15	243
22.....	187	April 1	October 31	214
24.....	98	March 1	October 31	244
25.....	96	March 20	October 31	230
26.....	116	March 21	November 15	227
27.....	77	March 3	November 15	268
35.....	70	March 24	November 16	204

Water District No.	No. Acre Feet Used by All Ditches from Natural Streams	Total No. of Acres That Can Be Irrigated	No. of Acres of Alfalfa	Natural Grasses
20	670,332	510,890	38,387	57,614
21	114,814	70,164	5,142	12,368
22	340,042	150,766	11,365	26,150
23	39,530	21,780	4,858	3,168
24	70,859	79,060	1,939	32,301
25	59,257	54,047	2,418	27,508
26	7,908	4,080	513	1,620
27	68,882	70,950	2,846	14,674
Totals	1,371,624	961,737	67,468	175,403

Water Dist. No.	Cereals	Pastures	Market Garden Peas	Potatoes	Beans
20	56,690	120,042	1,908	38,052	...
21	9,080	12,274	2,517	4,695	974
22	20,700	22,116	1,637	3,891	1,021
23	10,195	1,336	401	798	1,970
24	536	24,914	41	126	...
25	536	10,823	...	88	...
26	44	620	21	78	14
27	2,795	1,849	...	258	204
Totals	100,576	193,974	6,525	47,936	4,183

Water Dist. No.	Field Peas	Cabbage	Sugar Beets	Sweet Clover	Other Crops
20	15,565	113	...	33,218	15,684
21	3,495	320	...	2,793	1,296
22	6,380	167	...	7,170	3,465
23	7,414	265	1,037	...	4,282
24	7	...	...	...	56
25	...	...	...	...	...
26	...	...	...	...	...
27	92	...	60	...	40
35	1,650	636	96	...	1,027
Totals	34,603	1,501	1,193	43,181	25,850

Water District No.	Total Acres Irrigated	Cost of Administration Water Comm'rs and Deputies	Cost of Superintendence	Cost of Repairs	Cost of Improvements
20	377,273	\$ 2,661.00	\$ 3,927.00	\$ 5,944.00	\$ 2,036.00
21	54,954	1,804.00	...	...	...
22	104,062	1,542.00	1,305.00	3,770.00	988.00
23	35,724	1,909.00	2,215.00	1,310.00	50.00
24	59,920	1,440.00	1,200.00	2,310.00	2,000.00
25	41,323	1,350.00	75.00	30.00	250.00
26	3,102	1,380.00	...	...	...
27	26,035	1,059.00	...	...	...
Totals	702,392	\$13,145.00	\$ 4,795.00	\$ 7,420.00	\$ 3,288.00

COMPARISON OF TOTAL ACRES IRRIGATED

1932	705,781
1933	880,934
1934	638,766
1935	755,724
1936	663,724
1937	646,082
1938	702,392

COMPARISON OF COST ADMINISTRATION EXPENSE—WATER COMMISSIONERS AND DEPUTIES

1932	\$12,376.00
1933	11,427.00
1934	13,251.00
1935	13,893.00
1936	11,690.00
1937	13,580.00
1938	13,145.00

(These figures do not include November salaries)

WATER COMMISSIONERS' RESERVOIR REPORTS

Water District No.	Capacity in Acre Feet in All Reservoirs	Quantity of Water in Acre Feet in Reservoirs May 1	Quantity of Water in Acre Feet in Reservoirs Nov. 1	First Day Water Used from Reservoirs	Last Day Water Used from Reservoirs	Maximum Number of Days Water Used from Reservoirs	Total Number Acre Feet Water Used from Reservoirs
20.....	134,077	.....	.....	July 10	Sept. 10	63	71,534
21.....	31,752	14,676	5,072	July 26	Oct. 15	63	20,084
22.....	9,710	4,280	0	April 24	Aug. 16	115	6,000
24.....	112,563	21,880	17,592	April 1	Oct. 31	214	2,858
35.....	25,483	13,831	9,318	April 5	Oct. 10	186	31,454
Totals..	313,585						131,930

COMPARISON OF ACRE FEET CARRIED FROM RESERVOIRS

1932	147,101
1933	97,058
1934	62,391
1935	102,537
1936	111,807
1937	149,247
1938	131,930

COMPARISON OF ACRE FEET IN RESERVOIRS

	May 1	Nov. 1
1932	41,488	42,211
1933	56,875	29,080
1934	47,489	11,087
1935	28,216	64,361
1936	84,419	43,294
1937	79,910	36,060
1938	*93,520	82,051

(*Note: Of the 93,520 acre feet in storage on May 1, there is practically 6,000 feet used for fish culture.)

AMOUNT OF WATER IN ACRE FEET, IN STORAGE ON FIRST DAY OF EACH MONTH, FROM DECEMBER 1, 1937, TO NOVEMBER 1, 1938

	Rio Grande Reservoir Cap. 51,113	Santa Maria Reservoir Cap. 42,000	Continental Reservoir Cap. 26,716	Sanchez Reservoir Cap. 103,155
12-1-1937	401	3,266	674	13,033
1-1-1938	1,868	4,048	674	12,750
2-1-1938	2,527	4,632	674	15,122
3-1-1938	4,239	5,370	674	15,297
4-1-1938	5,855	6,179	674	15,673
5-1-1938	17,470	10,764	3,912	19,193
6-1-1938	51,113	21,618	6,531	30,523
7-1-1938	51,113	33,931	8,396	31,221
8-1-1938	33,435	26,241	4,912	19,503
9-1-1938	12,803	7,806	3,999	14,691
10-1-1938	16,523	8,632	3,687	16,797
11-1-1938	26,054	11,679	3,687	16,429

	Terrace Reservoir Cap. 17,700	La Jara Reservoir Cap. 14,052	Mountain Home Reservoir Cap. 19,150	Smith Reservoir Cap. 6,212
12-1-1937	0	2,836	5,668	3,210
1-1-1938	0	2,836	5,830	3,514
2-1-1938	1,150	2,836	6,108	4,596
3-1-1938	2,448	2,836	6,571	5,336
4-1-1938	2,667	2,836	6,730	5,336
5-1-1938	9,613	5,063	7,985	5,336
6-1-1938	15,631	7,836	12,974	5,336
7-1-1938	15,920	7,420	14,447	5,336
8-1-1938	3,462	3,166	9,853	5,336
9-1-1938	4,036	2,836	6,379	2,400
10-1-1938	3,110	2,650	6,108	3,330
11-1-1938	4,715	2,536	6,108	3,210

WATER COMMISSIONERS' RESERVOIR REPORTS

—Continued

	Cove Lake Reservoir Cap. 9,710	Salazar No. 1 Reservoir Cap. 100	Salazar No. 2 Reservoir Cap. 40
12-1-1937	0	...	...
1-1-1938	0	...	...
2-1-1938	0	...	...
4-1-1938	0	...	...
5-1-1938	1,500	100	30
6-1-1938	4,280	...	...
7-1-1938	2,600	...	...
8-1-1938	69	...	...
9-1-1938	28	...	...
10-1-1938	0	...	...
11-1-1938	0	120	20

	Archuleta Reservoir Cap. 97	Hunters Lake Reservoir Cap. 48	Spruce Lake No. 1 Reservoir Cap. 88	Spruce Lake No. 2 Reservoir Cap. 93
May 1.....	97	0	88	93
Nov. 1.....	0	0	0	0

	Dude Ranch Reservoir Cap. 125	Road Canon Reservoir Cap. 2,800	Poage Reservoir Cap. 260	Lost Lakes Reservoir Cap. 1,066
May 1.....	125	2,800	260	683
Nov. 1.....	0	2,800	0	0

	Shaw Reservoir Cap. 638	Bristol Head Reservoir No. 1 Cap. 153	Bristol Head Reservoir No. 2 Cap. 824	Beaver Park Reservoir Cap. 4,434
May 1.....	638	0	0	1,210
Nov. 1.....	180	0	0	0

	Regan Lake Reservoir Cap. 1,200	Chenoweth Reservoir Cap. 40	Eastdale Res. No. 1 Cap. 3,468	Eastdale Res. No. 2 Cap. 3,047
May 1.....	200	40	2,557	0
Nov. 1.....	200	40	1,023	0

	Goin's Lake Reservoir Cap. 40	Humphries Reservoir Cap. 842	Trout Lake Reservoir Cap. 198	Wright's Lake or Spring Creek Reservoir Cap. 120
May 1.....	40	842	198	120
Nov. 1.....	40	842	0	120

	Ruby Lake Reservoir Cap. 120	Hermit Lake Res. No. 1 Cap. 423	Hermit Lake Res. No. 2 Cap. 360	Grace Lake Reservoir Cap. 605	Sowards Lake Reservoir Cap. ..
May 1.....	120	423	360	605	200
Nov. 1.....	120	423	360	605	200

	Bergey Lake Reservoir Cap. 30	Goose Creek Reservoir Cap. 231	Wee Ruby Reservoir Cap. 90	Brown Lake Reservoir or Troutvale Cap. 510	Total Stor- age All Reservoirs
May 1.....	30	231	84	510	93,520
Nov. 1.....	30	0	0	510	82,051

REPORT OF CROP AND MARKETING CONDITIONS

Potatoes

The acreage of potatoes for 1938 was normal, but the yield was only 33% of normal. This partial failure was due to some extent to the inroads of the Psylid Nymph. However, a new disease has developed, bacteria wilt, which caused great damage. Many fields, where this was prevalent, were an entire loss.

The Agricultural College is working on some control of the disease, but, so far, the only suggestions are to dispose of all old seed stock, fumigate cellars, and use no ground where potatoes were infested for three or four years.

Root rot took its usual toll. This disease can be controlled somewhat by seed treatment and rotation.

Owing to the inroads of these various diseases, fully 50% of the acreage planted was never dug. Those fields which made a fair yield produced undersized markets with seed size predominating.

Shipments by rail and truck were 3,016 carloads this year, compared with 10,890 cars in 1937.

It is estimated that there are 4,000 cars in storage.

Prices are better than in 1937, bringing \$1.00 to \$1.05 per hundred, with prospects of better prices for later shipments.

Mixed Carloads Vegetables

These shipments contained all the various vegetable products raised in the Valley and were made up of spinach, cauliflower, lettuce, garden peas, broccoli, snap beans, carrots, turnips and large cabbage. Three hundred sixty-five cars were shipped, as compared with 336 in 1937. Eighteen straight cars of spinach, and four of carrots, were shipped.

Total car lot and truck shipments from the Valley:

	Cars	Cars
Potatoes	3,016	
Vegetables	2,287	5,303
<hr/>		
In 1937—		
Vegetables	1,927	
Potatoes	10,899	11,826
<hr/>		
4,000 cars now in storage.		

Head Lettuce

The acreage of lettuce in 1938 was above normal, but yield was below the average, due to excessive heat and shortage of water just at the time the crop came on. Late crop was good and prices very satisfactory.

Carload shipments were 293 cars, compared to 166 cars in 1937.

Cauliflower

The acreage and yield of cauliflower was 90%.

Owing to the backward spring, the early and late plantings came on at the same time, which had the tendency to bring down the price, which started at 75c a crate, then dropped to 15c.

Marketing agreement was resorted to in the latter part of the season, and endeavored to stabilize the market. As a result, many fields were not harvested.

Field Peas

The acreage of field peas was 80% with yield normal.

Black leg and root rot damaged the crop somewhat. There seems to be no remedy in eradicating this disease. Different sprays have been used but failed to help, so far as the disease is concerned. Spraying the crop, however, seems to improve the yield. Imported seed from non-infested area has been the most successful method of combating the disease.

The price \$2.75 per hundred weight prevailed, although the market is entirely local and mostly used for seed.

Field Corn

The farmers who experimented with corn this year met with disaster, due to killing frost in late July. Very little of the crop matured. There was quite a large acreage in the Valley.

Sugar Beets

The acreage, 2,800, of sugar beets, was normal, 3,000 acres being planted. The yield averaged 8 to 10 tons per acre, with a sugar content of 17.5%; earload shipment was 486, as compared with 351 cars last year.

Cabbage

The acreage of cabbage was above normal, with better than an average yield. The quality was excellent, with no damage from worms or disease. However, owing to the backward spring, the early and late plantings came on at the same time, making a decided surplus on the October market.

The Federal Government helped the situation somewhat by contracting for 100 earloads at \$5.25 per ton, while 215 cars went out by rail and trucks, bringing \$6.00 per ton. In 1937 there were 363 cars shipped.

A number of fields were not harvested, owing to poor demand.

Market Garden Peas

The acreage of market garden peas was normal and the yield good. However, a hard freeze, which came late in July, did serious damage to the extent of 20% of the crop, rendering the peas affected by the freeze unfit for the market.

The marketing agreement was in effect, but not called on to

function in the Valley, because the damaged peas which could not be marketed relieved the surplus. The price was satisfactory, starting out at $2\frac{3}{4}$ and later dropped to 2 cents.

There were 653 straight cars shipped this year, compared with 586 carloads shipped in 1937.

Some fields were affected with mildew, which rendered the peas unfit for market. Those affected, however, were disposed of to the canning factory and were not a total loss.

This disease can be successfully combatted by a dust spray of sulphur.

Cereal Crops

Oats and **barley** acreage was normal and the yield was normal.

Prices were very low. Barley brought 50 cents and oats 60 cents per hundred weight. The demand was poor.

Wheat acreage and yield was about 90% of normal. Some frost damage caused shriveled kernels. Price ranged from 50c to 60c per hundredweight.

Sweet clover acreage was above normal, and the yield of seed crop was 85% owing to frost damage.

Demand for seed is slow. Recleaned seed is selling at 4c per pound.

On an average, yield of seed is 50 pounds per acre. Many crops were turned under as green fertilizer.

Alfalfa—The first cutting was above average and the quality was good; the second cutting was very light, due to heavy frost during the latter part of July.

The demand was poor. No outside market. Local market was \$6.00 per ton baled.

Soil conditions were excellent for early seeding and continued good until July and August, when some crops were damaged by drought, especially root crops.

The river flow was sufficient to bring up the seed without calling on reservoir supply.

Resettlement

Forty-two units have been completed, which consist of a 4-room dwelling house, a 20x40-foot barn, a 12x20 chicken house. There are 60 tenants, some living in tents until improvements are completed.

On 40 units the brush has been cleared, land leveled and ditched, ready for 1939 crops. Each unit (80 acres) will be fenced and will have an artesian well.

As practically all of these units are brush land and irregular surface, they will have to be cleared and leveled.

The Government has set up a budget for living expenses until the land will produce a living.

The settlers do some of the work themselves, but the Department is doing most of the improvement.

Settlers are given preference on all work which they are qualified to do.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER
OF IRRIGATION DIVISION NO. 4 FOR THE
SEASON OF 1937

Montrose, Nov. 30, 1937.

Mr. M. C. Hinderlider,
State Engineer,
Capitol Building,
Denver, Colo.

Dear Sir:

Herewith I submit my annual report for the season of 1937.

Precipitation for the winter of 1936 and 1937 was irregular; some areas being above normal, while others fell below. Fortunately the ground conditions were fairly good, the watersheds from which most of the irrigation water comes, had an ample run-off, and this run-off came in a way that provided for the most advantageous use. The reservoirs on the north and south slopes of Grand Mesa, where most of the storage for Water Districts 40 and 42 is made, were filled nearly 100 per cent. This was especially fortunate, as the Fruit Growers Reservoir, largest in this area, was lost before any of the water was drawn, and would have left about 3,000 acres of land without water to mature crops. Owing to the fact that the Grand Mesa reservoirs had an unusually large supply, they were able to supply this shortage at a price ranging from \$1.50 to \$2.50 per acre foot.

The latter part of the summer from July 15th to Sept. 15th was very dry. The Gunnison River discharge at the tunnel portal was 307 second feet on Sept. 19th, as compared with 306 second feet on the same date 1934. However, there was being impounded at Taylor Park at this time, 70 second feet of water, so the flow was slightly larger this year.

The following statement from Jesse R. Thompson, Acting Superintendent of the Uncompahgre Valley Water Users Assn., gives a good idea of conditions under the project.

"Under the terms of the contract between the Bureau of Reclamation and the Uncompahgre Valley Water Users Association, approved Aug. 4, 1931, the operation and maintenance of the Project was assumed by the Association on Jan. 1, 1932.

"The Project irrigation system includes approximately 600 miles of canals and laterals, and requires 1,400 second feet of water entering the Project during the periods of peak demand.

"Although the snowfall in the hills showed a water content above normal, the water supply did not meet the demand. From July 21 to Aug. 30, water was delivered at various heads below 100%. When possible to deliver as much as 60% of a head or more, water was delivered on a percentage basis. When the

supply was not sufficient to deliver 60% of a head, rotation was practiced.

"Due to rains in the high watershed, increasing the flow, water was delivered from Aug. 30 to Sept. 19 on a 100% basis. From Sept. 19 to Sept. 30 the supply dropped so low for a few days that it again became necessary to rotate. After Sept. 30, the demand for water decreased to such an extent that there was enough water to meet all demands. There were no serious crop losses reported due to the shortage of water.

"Water was delivered on demand to the water users on an acre foot basis. The lands generally on the west side of the Uncompahgre River, were furnished five acre feet of water for a minimum of \$1.65 per acre. Lands generally on the east side of the Uncompahgre River, which consist principally of adobe soils, were furnished four acre feet of water at a minimum of \$1.32 per acre. Excess water was furnished at the rate of 10 cents per acre foot for all water received in excess of five acre feet per acre.

"Operating conditions of the Project canals and laterals were generally good throughout the irrigation season. No operating troubles were experienced in connection with the Gunnison Tunnel. The water was shut out of the Gunnison Tunnel on May 15, to take the reading of the gages in the tunnel. This was necessary so as to obtain information needed in connection with the rehabilitation work to be done in the tunnel the coming winter. At this time there was sufficient water in the Uncompahgre River to meet all demands. On June 27th, about 5:00 P. M., Miss Arlene Morse, a little 14-year-old girl living near West Portal, fell into the canal and drowned. Water was shut out of the tunnel to find the body, which was located about 2:30 the next morning. Water was again shut out of the Gunnison Tunnel from 5:00 P. M. July 1, to 3:00 A. M. July 3, to make necessary repairs to the lining on the South Canal.

"Generally excellent yields have been obtained by Project farmers during the season of 1937 for all crops. Prices in general have been fair.

"Fall weather conditions have been favorable for harvesting all crops.

"There were 62,535 acres irrigated during the season. The number of acres of each of the principal crops were as follows:

Indian corn.....	8,000 acres
Onions	1,229 acres
Sugar beets.....	1,617 acres
Oats	4,328 acres
Potatoes	3,911 acres
Alfalfa	20,864 acres
Wheat	8,875 acres
Barley	1,128 acres
Beans	1,650 acres

"Appreciation is expressed to the office of the Irrigation Division Engineer of Irrigation Division No. 4 for the efficient manner in which the diversion of water in this section of the Western Slope has been administered."

It has been increasingly evident during the past few years that better records of water use are necessary in this division. The federal and conservative private loan agencies now make a very careful investigation of water rights of all borrowers, and I have filled several requests for as much as ten years' delivery of water from irrigation systems, in order to satisfy such investigation. In view of this necessity, this office has begun and continued the preparation of tabulated priority lists of the various water districts. Completed lists have been prepared for six districts—28, 41, 59, 60, 62 and 68. Data has been completed for District 42, but the tabulation has not been completed. In most of these cases, before tabulation could be begun, it has been necessary to review court records and secure many copies of decrees that have not been sent in to either the State or Division office. Blue print copies of the lists have been given the various water commissioners, and have enabled them to secure records for ditches that had not previously been listed.

Hydrographic data has been largely secured through the co-operative arrangement with the U. S. Geological Survey, and voluntary cooperation with the Bureau of Reclamation. One new rating station was established and one repaired. Three stations are being prepared for the determination of natural flow and transportation losses on streams that carry reservoir water from Grand Mesa. In order to secure proper data as to inflow to the Taylor Park Reservoir, it will be necessary to establish rating stations on Taylor River, Texas Creek, and Willow Creek above the high water line of the reservoir. The Uncompahgre Water Users Assn. has asked this office to help in this work, and since they have carried the main part of the burden in rating the Uncompahgre River, where very frequent ratings are necessary due to continued shifting of the control, I believe we should grant this request. For the present, I think staff-gage stations will be all that will be required.

The Parshall flume has constantly grown in favor as a measuring device for the distribution of water. About 30 new ones have been installed during the past season. Other devices in use are the Rectangular Weir with end contractions, the Rectangular Weir with suppressed end contractions, the Cippoletti Weir, the Ninety Degree V-Notch Weir, the Farmers Short Box Weir, the Spill-Box, and the Calco Headgate. Some of these are very substantial installations, and will last for many years.

The Bureau of Reclamation has made, or is making, surveys on the whole Division, and there is a prospect of the construction of several projects to furnish supplemental water for irrigation. The most feasible appear to be one in the North Fork of the Gunnison River Valley, in three units, and one in the Plateau

Creek Valley, consisting of a reservoir on Leon Creek, and the High Line Canal above the whole of the irrigated area. Money has already been allotted for the reconstruction of the Fruit Growers Reservoir. Other improvements include a repair of the Park Reservoir outlet conduit, which has been begun; the repair of the dams on the Womack system and the proposed Onion Valley reservoir enlargement.

The Taylor Park Reservoir, with a height of dam of 165 feet and a capacity of 106,000 acre feet, was completed this year. There was already a storage of 10,000 acre feet on Nov. 1, and storage will continue at about 4,000 acre feet per month during the winter. This will insure a full supply of water for the Uncompahgre Project during the latter part of the summer. The drainage project begun last year on this Project has gone ahead rapidly, and already there are an estimated 10,000 acres of land reclaimed.

Adjudication proceedings have been recently concluded in two water districts, 40 and 41, and are being held in seven others—28, 42, 59, 60, 62, 63 and 68. These should protect the present use of the Division against attack from any other state, as there will probably be 1,200 new decrees granted.

The past year crops have been good. The established livestock range industry had good production and prices. Fruit growers have done well, except for the poor price of apples. There is one sugar factory in operation in the division, the Holly factory at Delta. The reported production of beets for 1937 is 76,000 tons. It appears that there has been a decline in sugar beet production in recent years, due to the popularity of competitive crops and the uncertainty of getting good labor. Crops of potatoes were below normal, especially in the Uncompahgre Valley, probably due to the very dry, hot weather of late summer.

New developments include more extensive corn growing, livestock fattening and commercial seed growing. Corn crops have increased consistently for several years. The development of new strains of seed adapted to this climate have resulted in greatly increased production. The maximum recorded is 119 bushels per acre, with crops of 75 bushels frequently reported. Such production has made it profitable to fatten cattle, hogs and sheep on home-grown feed—especially as the range-grown sheep and cattle of this area go on full feed several weeks more quickly than those shipped from poorer summer pasture.

Commercial seed production, besides that of seed corn, include squash, beans, cucumbers, onions and red clover seed.

Turkey growing and dairying have become well established.

All things considered, I believe the past year has been one of steady development.

I enclose tabulation of Water Commissioner's Annual Report.

Very truly yours,

FRED S. HOTCHKISS,

Irrigation Division Engineer, Irrigation Division No. 4.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS, 1937

Dist. No.	Ditches Reported	No. of Priorities	Amount of Appropriation Cu. Ft. Per Sec.	Capacity of Canals and Ditches Cu. Ft. Per Sec.	Length of Canals or Ditches in Miles	First Day Water Was Used
28.....	190	199	596.92	1,863.55	216.5	May 1
40.....	382	557	2,507.79	3,331.00	1,108.6	Mar. 10
41.....	75	139	3,166.75	3,206.00	675.0	Mar. 10
42.....	268	273	3,117.57	3,830.57	1,285.4	Mar. 15
59.....	99	161	679.31	2,109.50	219.5	Apr. 20
60.....	203	209	973.84	1,160.00	537.8	Jan. 1
61.....	13	32	84.37	125.25	46.0	Apr. 1
62.....	75	88	312.75	799.00	171.8	Apr. 15
68.....	155	199	705.56	824.39	640.7	Apr. 10
Totals.....	1,460	1,857	12,144.86	17,249.26	4,901.3	

Dist. No.	Last Day Water Was Used	Average No. Days Water Was Used	Average Daily Amount in Sec. Ft.	No. Acre Feet Used	No. Acres Can Be Irrigated
28.....	Aug. 15	110	1,057.4	232,611	30,708
40.....	Nov. 19	141	1,413.7	397,868	209,143
41.....	Oct. 31	193	1,501.5	577,811	90,032
42.....	Nov. 30	182	1,839.3	689,032	206,660
59.....	Oct. 10	83	1,538.0	255,461	24,031
60.....	Dec. 31	164	579.6	190,078	150,785
61.....	Nov. 15	171	37.9	13,019	7,574
62.....	Nov. 17	106	514.6	108,676	18,905
68.....	Oct. 10	109	412.1	89,786	23,555
Totals.....		143	8,894.1	2,544,342	761,393

IRRIGATION DIVISION NO. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
CROP REPORTS, 1937

Dist. No.	Alfalfa	Natural Grasses	Cereals	Orchards
28.....	48	28,940	33	.....
40.....	55,624	36,688	19,455	10,103
41.....	24,225	4,316	25,274	750
42.....	30,938	13,018	9,837	6,220
59.....	119	21,058	5	.....
60.....	13,592	10,262	13,695	236
61.....	1,835	3,264	799	36
62.....	1,430	7,836	1,699	30
68.....	5,025	8,323	1,680	13
Totals.....	132,836	133,705	72,477	17,388

IRRIGATION DIVISION NO. 4—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
CROP REPORTS, 1937

Dist. No.	Market Gardening	Potatoes	Sugar Beets	Other Crops
28	4	46	.....	.....
40	1,034	3,025	4,020	10,866
41	595	4,105	1,853	9,059
42	2,529	1,351	1,461	54,376
59 .....	.....	68	.....	118
60	258	531	.....	401
61	28	9	.....	188
62	30	1,047	.....	2,257
68	19	79	39	1,361
Totals	4,497	10,261	7,373	78,646

Dist. No.	Total Irrigated	Super- intendence	Repairs	Improve- ments
28	29,071	.....	.....	.....
40	140,835	\$ 10,720	\$ 38,135	\$ 2,750
41	70,177	4,000	98,000	879,610
42	119,730	25,687	103,650	60,717
59	21,368	500	4,575	.....
60	38,975	900	18,204	13,388
61	6,159	.....	.....	.....
62	14,329	1,725	4,290	100
68	16,539	4,165	597	123
Totals	457,183	\$ 47,697	\$267,451	\$956,688

IRRIGATION DIVISION NO. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
RESERVOIR REPORT, 1937

Dist. No.	No. in District	Area of High Water Line, Acres	Capacity in Cubic Feet	Quantity of Water in Reservoir May 1	Quantity of Water in Reservoir Nov. 1
40	151	2,868	1,363,972,500	1,196,523,504	17,637,444
42	68	1,980	733,167,952	.....	.....
60	2	392	219,296,365	110,470,143	56,997,655
Totals	221	5,240	2,316,436,817	1,306,993,647	74,635,099

Dist. No.	First Day Water Was Used	Last Day Water Was Used	Average No. Days Water Was Used	Average Daily Amount in Sec. Ft.	No. Acre Feet Carried
40	June 1	Oct. 31	46	297	27,251
42	May 7	Oct. 31	50	109	11,008
60	June 1	Oct. 31	92	19	3,457
Totals			49	425	41,716

Dist. No.	Super- intendence	Repairs	Improve- ments
40	\$ 250.00	\$ 250.00	\$ 7,000.00
42	1,864.00	532.00	3,900.00
60 .....	.....	.....	.....
Totals	\$ 2,114.00	\$ 782.00	\$ 10,900.00

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER
OF IRRIGATION DIVISION NO. 4 FOR THE
SEASON OF 1938

Montrose, Colo., November 28, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colo.

Dear Sir:

Herewith I submit my annual report for the season of 1938.

Precipitation for the winter of 1937-38 was generally above normal. The spring of 1938 was late and cold, and the water content of the snow was high. Ground conditions, due to late summer storms at high altitude, were exceptionally good. As a result the runoff provided more water for storage than has been available for many years. In the Grand Mesa area of Water Districts 40 and 42, where the largest storage is made in this division, the storage was nearly 100 per cent, the largest for at least ten years. Summer storms kept the stream flow up well during the latter part of the season, and as a result there should be a considerable holdover to insure next year's supply.

Storage in the Taylor Park Reservoir was available this year for the first time. Storage was made to about 45,000 acre feet. The supply would have filled the reservoir to full capacity, but this was not considered necessary. The unusually large flow of the river supplied most of the water necessary for the users, the amount of stored water used being about 15,000 acre feet. Late fall ratings showed the inflow to the reservoir to be approximately twice as large as on the corresponding date of 1937, so it seems probable that with a fair runoff the reservoir will fill to capacity this year.

The enclosed statement from Jesse R. Thompson, Superintendent of the Uncompahgre Valley Water Users Association gives a good idea of conditions under the Uncompahgre Valley Project.

UNCOMPAHGRE PROJECT, COLORADO

Season 1938

"Under the terms of the contract between the Bureau of Reclamation and the Uncompahgre Valley Water Users' Association approved August 4, 1931, the operation and maintenance of the project was assumed by the Association on January 1, 1932.

"The project irrigation system includes approximately 600 miles of canals and laterals and requires 1,400 second feet of water entering the project during periods of peak demand.

"The water content in the snowfall on the Gunnison watershed, the main source of supply for the project, was about 65 per cent above normal for the past 25 years. The project also had an additional supply of about 45,000 acre feet which had been stored in the Taylor Park Reservoir. This was the first year water had been stored in this reservoir. Due to the unseasoned condition of the dam it was not filled any higher the first year. It is anticipated that the reservoir will be filled to its capacity of 106,000 acre feet next year.

"Due to the limited capacity of the Gunnison Tunnel, it was necessary to deliver water a few days in August on a 90 per cent basis. The balance of the month water was delivered on a 100 per cent basis. With the above exceptions water was delivered on demand throughout the season.

"Water was delivered on an acre foot basis, deliveries being made to the individual water user when requested. The lands generally on the west side of the Uncompahgre River were furnished five acre feet of water for a minimum of \$1.65 per acre. Lands generally on the east side of the river, which consists principally of adobe soils, were furnished four acre feet of water at a minimum of \$1.32 per acre. Excess water was furnished at the rate of 10c per acre foot for all water received in excess of five acre feet per acre.

"Considerable difficulty was experienced in maintaining the flow in several of the large canals with headgates on the Uncompahgre River. This trouble was due to the excessive amount of water in the river which was the highest year on record with the exception of the year 1921. On June 13, about 400 second feet left the channel a short distance above the Selig headgate and returned to the channel about a mile below the headgate. It took the combined efforts of the Water Users' employees, local BR-23 CCC enrollees, and county help to prevent the river from entirely leaving the channel at this point, which would have left the Selig headgate high and dry. About the same condition occurred at the Ironstone headgate soon after the river was brought under control at the Selig and it became necessary for all hands to rush to this point. Soon after this the feeder headgate on the West Canal was completely washed away.

"In September the valley experienced a general heavy rain, over four inches falling within a few days. As a result of this rain seven large flumes were washed out, two large canals broke, ditches were filled with debris and banks were eroded by overflowing waters. No operating trouble was experienced in connection with the Gunnison Tunnel. About 300 second feet was turned through the Gunnison Tunnel on April 2, to clear tunnel of debris caused by large rehabilitation crew enlarging tunnel throughout the winter. This water was shut off and an inspection made on April 3. After the inspection several loads of rock were hauled out and water turned in for the season that evening.

On May 15, the water was shut out of the tunnel to read the tunnel gages. This was necessary so as to obtain information needed in connection with the rehabilitation program in the tunnel the following winter. At this time there was sufficient water in the Uncompahgre River to meet all demands. On May 27, at 4 P. M. water was shut out of the tunnel again to make needed repairs to the concrete section on the South Canal at Sta. A 6.05. At this time the tunnel gages were read and all concrete sections on the south canal inspected and repairs made where needed. Repairs were completed and water turned back into the tunnel at 6 P. M. May 30. The Uncompahgre River supplied all demands during this period. At 7 P. M. July 24, water was again shut out of the Gunnison Tunnel to read the tunnel gages. The South Canal was inspected at this time, some minor repairs made and the water turned back in at 9 P. M. July 25.

"On August 5, 1938, the first water from the Taylor Park Reservoir to be used on the Uncompahgre Project, was turned out. In order to fill the Gunnison Tunnel it was necessary to supplement the flow in the Gunnison River with water from the Taylor Park Reservoir throughout the month.

"General excellent yields have been obtained by project farmers during the season of 1938 for all crops except potatoes and onions. Considerable damage to hay and grains was caused by heavy rains during harvest in September. Prices in general were poor.

"Approximately 62,000 acres were irrigated during the season, the principal crops being alfalfa, wheat, corn, oats, potatoes, beans, sugar beets, onions and barley.

"Sincere appreciation is expressed to the office of the Division Irrigating Engineer of the State of Colorado for the efficient manner in which the diversion of water in this section of the Western Slope has been administered."

Considerable improvement work has been done on irrigation projects this year. An increase in the height of the dam of the Fruitland Reservoir under the supervision of your office will nearly double its storage capacity and furnish water that is badly needed. The dam of the Fruit Growers' Reservoir, which failed in 1937, was rebuilt under the Bureau of Reclamation and has begun storing for next year's use. The original reservoir had a capacity of 3,400 acre feet; as reconstructed it will hold about 4,500 acre feet.

Notice was given by you to the owners of a large number of reservoirs in Water Districts 40 and 42 that repairs were necessary before next year's storage season. In many cases repairs have been made. Where they have not it will be necessary to restrict the storage or prohibit it altogether for the protection of the public. A full report of repairs made will be submitted to you before storage begins, with recommendations as to what the present conditions of these reservoirs is. Winter storage is

not generally practiced in this area, the gates being left open until the spring runoff starts late in April, except when water is held over. Little or no holdover occurs in stream reservoirs that have ample supply for filling.

Crops this year were good, but prices low for most farm products. Cattle prices and the price of fruits, however, showed an improvement over last year.

Adjudication of water rights in all but one of the ten districts of this division have continued and will no doubt be concluded soon. I estimate that 1,200 to 1,500 new decrees will be granted to ditches and reservoirs.

The enclosed tabulation of water commissioners' annual reports is based on field book records in Districts 40, 41, 42, 60, 61 and 68. In Water Districts 28, 59, and 62 commissioners have never been called out except to settle disputes between users, and in seasons of plentiful supply, such as that of 1938, the report constitutes nothing more than an estimate, except for a few ditches from the Cimmaron Creek in Water District 62, the diversions of which I have gotten myself. Water District No. 63, the Dolores River and its tributaries below the mouth of the San Miguel River, has no commissioner, but a few of the ditches were reported by the commissioner of District 42.

I wish to express my appreciation for the help of your office in administering this Division.

Very truly yours,

FRED S. HOTCHKISS,
Irrigation Division Engineer, Irrigation Division No. 4.

IRRIGATION DIVISION NO. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS, 1938

Dist. No.	Ditches Reported	No. of Priorities	Amt. of Appropriation Cu. Ft. Per Sec.	Capacity of Canals and Ditches Cu. Ft. Per Sec.	Length of Canals or Ditches in Miles
28	210	212	599.65	1,905.40	173.20
40	497	698	3,168.64	3,843.75	1,150.50
41	82	139	3,182.76	3,322.00	700.00
42	300	304	2,311.09	3,854.00	1,317.00
59	99	161	679.31	2,109.00	219.50
60	232	233	1,159.54	1,446.00	602.00
61	12	34	75.67	100.00	47.00
62	75	88	312.75	799.00	171.80
68	161	198	714.17	714.50	396.30
Totals	1,668	2,067	12,203.58	18,093.65	4,777.30

Dist. No.	First Day Water Was Used	Last Day Water Was Used	Average No. of Days Water Was Used	Average Daily Amt. in Sec. Ft.	No. Acres Ft. Used	No. Acres Can Be Irrigated
28	Apr. 15	Aug. 1	88	915.50	161,120	32,079
40	Jan. 1	Dec. 31	128	1,913.71	489,388	237,792
41	Mar. 2	Oct. 31	177	1,480.41	524,160	102,190
42	Mar. 25	Nov. 15	172	1,975.00	677,924	203,965
59	Apr. 20	Oct. 10	83	1,538.00	255,461	24,031
60	Jan. 1	Oct. 31	153	700.37	214,751	151,157
61	Apr. 1	Nov. 15	165	35.21	11,535	9,004
62	Apr. 15	Nov. 17	106	514.60	108,676	18,905
68	Apr. 25	Nov. 8	112	370.26	82,620	28,850
Totals Jan. 1	Dec. 31	134	9,443.06	2,525,635	807,973	

IRRIGATION DIVISION NO. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
CROP REPORTS, 1938

Dist. No.	Alfalfa	Natural Grasses	Cereals	Orchards
28	78	28,979	44	.....
40	54,980	30,133	21,414	13,102
41	22,343	3,167	26,069	720
42	31,022	14,262	10,794	6,138
59	119	21,058	5	.....
60	13,277	10,650	13,898	224
61	1,680	3,333	1,013	39
62	1,430	7,836	1,699	30
68	5,315	11,442	2,172	14
Totals	130,244	130,860	77,108	20,267

Dist. No.	Market Gardening	Potatoes	Sugar Beets	Other Crops
28	3	28	.....	.....
40	842	2,521	4,576	28,523
41	698	4,292	2,056	12,891
42	2,371	1,048	636	49,213
59 .....	.....	68	.....	118
60	259	612	.....	261
61	17	3	.....	180
62	30	1,047	.....	2,557
68	8	103	91	956
Totals	4,228	9,722	7,359	94,699

IRRIGATION DIVISION NO. 4

Dist. No.	Total Irrigated	Super- intendence	Repairs	Improve- ments
28	29,132	.....	.....	.....
40	156,091	\$ 8,465	\$ 44,098	\$ 5,305
41	72,236	7,805	93,127	20,081
42	115,484	38,875	108,953	7,846
59	21,368	500	4,575	.....
60	39,181	5,087	24,332	6,132
61	6,265	370	544	650
62	14,629	1,725	4,290	100
68	20,101	8,439	1,675	58
Totals	474,487	\$ 71,266	\$281,594	\$ 39,902

IRRIGATION DIVISION NO. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
RESERVOIR REPORTS, 1938

Dist. No.	No. in District	Area of High Water Line, Acres	Capacity in Acre Feet	Quantity of Water in Reservoir May 1	Quantity of Water in Reservoir Nov. 1
40	159	3,033	39,684	33,795	3,914
42	68	1,919	15,824	.....	.....
59	1	2,033	106,000	32,700	52,800
60	2	392	5,034	1,959	2,444
Totals	230	7,377	166,542	68,454	59,158

Dist. No.	First Day Water Was Used	Last Day Water Was Used	Average No. Days Water Was Used	Average Daily Amt. in Sec. Ft.	No. Acre Ft. Carried
40	6-20	11- 5	38	399.98	30,147
42	6- 7	10-25	46	131.39	11,989
59	8- 5	9- 5	30	250.00	15,000
60	5- 1	9- 7	53	38.00	4,002
Totals	5- 1	11- 5	37	819.38	61,138

IRRIGATION DIVISION NO. 4

Dist. No.	Super- intendence	Repairs	Improve- ments
40	\$ 2,776.00	\$163,465.00	\$ 38,160.00
42	2,000.00	500.00	4,000.00
59	2,000.00	.....	*1,361,503.00
60 .....	.....	.....	.....
Totals	\$ 6,776.00	\$163,965.00	\$1,403,663.00

*Improvement listed for District 59 includes cost of construction of Taylor Park Dam, extending over years 1936, 1937 and 1938.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER
OF IRRIGATION DIVISION NO. 5 FOR THE
SEASON OF 1937

Glenwood Springs, Colo., November 30, 1937.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

In compliance with the provisions of the law, I have the honor to transmit herewith my first annual report as Division Irrigation Engineer for Irrigation Division No. 5 for the year ending November 30, 1937.

I wish to thank you and your office for the help and advice extended to me in my first year as Division Engineer.

Administration

During the season the Division Engineer traveled on an average of about 240 miles per month, for a total of 3,862 miles. He also traveled an estimated mileage of 160 miles on horseback.

Of the 823 ditches reported in the water commissioners' annual reports the division engineer has visited the headgates at least once of 310 of these ditches.

On June 1st the office of the division engineer was moved to the Garfield County Court House, where office space was obtained on the second floor, directly across the hall from the District Clerk's office, which makes it conveniently near the District Court records.

This office has frequently been called on this season to settle disputes and difficulties arising between the water users, thus making it necessary to make a number of rulings and give orders to water commissioners in regard to certain priority rights. A number of cases of water stealing were reported, but were taken care of without any arrests having to be made.

Water Commissioners

Owing to the resignation of I. Graham, Water Commissioner of District No. 39, a new man, Charles Rauman, was appointed and took over the duties as commissioner on April 22. His work has been very satisfactory.

Mr. Moore, Water Commissioner in District No. 70, also resigned and a new man, George Anderson, was made water commissioner of that district and his work has been very satisfactory.

Administration Costs

Cost of administration of Division No. 5 for the year 1937 was \$7,587.99. This includes salaries of all commissioners and their deputies. One hundred forty-one thousand seventy-two acres were irrigated at a cost of .053 cents per acre for services of water commissioners and their deputies.

Dist. No.	Acres Irrigated	Commissioner's Fees	Deputies' Fees
37	25,779	\$ 954.00	.....
38	34,658	852.00	\$ 260.00
39	22,698	1,218.00	280.00
45	31,326	828.00	1,470.00
52	4,517	144.00	.....
53	13,895	312.00	339.99
70	8,199	930.00	.....
Total	141,072	\$5,238.00	\$2,349.99

Precipitation and Temperatures

Rainfall during the growing season came at times when most needed by crops on both irrigated and dry land farms.

Low temperatures during the first part of May retarded growth and made the growing season about ten days later than usual, these low temperatures held back the spring runoff of the streams and gave farmers time to get crops in and ditches cleaned so that when the runoff did come they were ready to make the best possible use of it.

Following are the temperatures and precipitation as recorded at Rifle and Glenwood Springs during the growing season. A comparison has been made of the precipitation for the past three seasons from which it will be noted the 1937 season has had a more even distribution than in 1935 and 1936 and also that the precipitation has been heaviest during months when most needed.

RIFLE

	May	June	July	Aug.	Sept.
Maximum Temp.....	87	97	99	98	90
Minimum Temp.....	25	28	40	33	21
	May	June	July	Aug.	Sept.
Total Precipitation 1937.....	.25	.33	2.17	.54	.71
Total Precipitation 1936.....	..	.05	1.54	1.50	.45
Total Precipitation 1935.....	1.95	..	.90	.32	1.01

GLENWOOD SPRINGS

	May	June	July	Aug.	Sept.
Maximum Temp.....	87	95	95	95	89
Minimum Temp.....	28	32	48	42	30
	May	June	July	Aug.	Sept.
Total Precipitation 1937.....	1.15	0.92	4.51	2.31	.96
Total Precipitation 1936.....	0.49	0.63	2.06	1.65	1.09
Total Precipitation 1935.....	2.54	0.50	0.88	1.46	2.89

Snowfall

District No. 37 estimated 60% of normal. District No. 38 estimated 75% of normal. District No. 39 estimated 75% of normal. District No. 45 estimated 75% of normal. District No. 52 estimated 70% of normal. District No. 53 estimated 70% of normal. District No. 70 estimated 15% above normal.

Hail

Several destructive hail storms occurred in the division this season. The most severe damage was done to potatoes in one section of Water District No. 38. Considerable damage was done to vegetables and berry crops in one section of District No. 45.

Floods

Several very bad cloudbursts occurred in District No. 70 this season, causing much damage to fields and destroying many dams and headgates in ditches.

Crops

The principal crops grown in this division are natural hay, alfalfa, sugar beets, potatoes, oats, barley and wheat. While high yields have been obtained in some cases the average yields prevailing within the division this season have been about as follows:

Hay	11 $\frac{1}{4}$ tons per acre
Alfalfa	2 tons per acre
Sugar beets.....	11 tons per acre
Potatoes	200 bu. per acre
Oats	50 bu. per acre
Barley	40 bu. per acre
Winter wheat.....	30 bu. per acre
Spring wheat.....	40 bu. per acre
Corn	35 bu. per acre

Potatoes

The potato acreage in the division this year shows 7,183 acres, an increase of 334 acres over last year. The yield per acre this year has been below normal, due to a late spring, poor stand, and hot days in the latter part of the season.

Potato prices have been very discouraging this fall and many farmers are holding their crop in storage hoping for better prices after the first of the year or in the spring.

Sugar Beets

The sugar beet acreage in the division this year shows 2,644 acres, an increase of 146 acres over last year. Most of the sugar beet acreage is located in the Rifle vicinity in Districts No. 39 and 45. This crop is becoming a very popular crop with the farmer as it is a sure money crop.

Native Hay and Alfalfa

The hay crop in this division was very good this year, but much of the first cutting was damaged to some extent by rains. But the rains made it possible for a good second cutting and on a whole did much more good than harm.

Cereals

Wheat, oats, barley and corn crops were all good this season. The yield was considerably more than in the past five years. Corn is coming more in favor among the farmers in this division and the acreage has been steadily increasing the past few years.

New Work and Improvements

The Hughes reservoir in District No. 38 drained their reservoir this fall and have placed a new outlet gate and a new operating device below the dam which will make it much better for the water commissioner to regulate the water next season.

Work was begun by the Multa Trina Ditch Company this fall in District No. 45 on two ditches, one of which will divert water from Thompson Creek in District No. 38 to Divide Creek in District No. 45 and the other will divert water from Jones Creek in District No. 40 to Divide Creek.

In District 50 the Missouri Ditch was enlarged and extended this spring.

A number of improvements in ditches and diversion dams have been made this fall under the direction and assistance of the division engineer. It is planned to install a number of new Parshall flumes in the spring.

Parshall Measuring Flumes

During the season 20 new Parshall measuring flumes of various sizes were placed in this division. There were four placed in District No. 38, two in District No. 39, seven in District No. 45, four in District No. 53 and three in District No. 70.

Municipal Water Supply

The town of New Castle, which gets their water supply from Elk Creek in District 39, is installing 6,250 feet of new 8-inch steel pipe line to replace an old 6-inch pipe line at a cost of about \$10,000.

The city of Rifle have had a better flow of water from Beaver Creek in District No. 45 this year than for several years. But the time is fast approaching when the city will be forced to find an additional water supply as the present supply is becoming inadequate.

Trans-Mountain Diversion

Following is a report of the trans-mountain diversion from Division No. 5 to Division No. 2:

Twin Lakes Tunnel, Jan. 1 to Nov. 1, 1937.....	31,926	Ac. Ft.
Busk-Ivanhoe Tunnel, Jan. 1 to Nov. 1, 1937.....	5,157	Ac. Ft.
Ewing Ditch, Jan. 1 to Nov. 1, 1937.....	376	Ac. Ft.
Wurtz Ditch, Jan. 1 to Nov. 1, 1937.....	1,740.5	Ac. Ft.
Columbine Ditch, Jan. 1 to Nov. 1, 1937.....	1,284.2	Ac. Ft.
Fremont Ditch, Jan. 1 to Nov. 1, 1937.....	1,112.6	Ac. Ft.

Total41,596.3 Ac. Ft.

Yours very truly,

L. C. FINLEY, Division Engineer.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS FOR IRRIGATION SEASON OF 1937
IRRIGATION DIVISION NO. 5

District No.	No. of Ditches Reported	Amount of Appropriation Cu. Ft. Per Sec.	Capacity of Canal	Length of Main Ditch in Miles	First Day Water Was Used	Last Day Water Was Used
36	.....	.....	.....	.....	.....	.....
37	..... 217	1,820.82	1,952.39	375.5	May 1	Nov. 1
38	..... 137	864.79	1,341.80	121.0	May 1	Oct. 15
39	..... 123	624.21	770.30	223.5	Mar. 1	Oct. 31
45	..... 116	792.08	845.00	227.0	Apr. 1	Oct. 2
50	.....	.....	.....	.....	.....	.....
51	.....	.....	.....	.....	.....	.....
52	..... 87	142.18	239.20	46.0	Apr. 1	Sept. 30
53	..... 83	296.66	*350.00	69.3	Apr. 20	Oct. 25
70	..... 60	155.43	296.00	112.0	Apr. 1	Oct. 26
Totals	.....	4,696.17	5,794.69	1,174.22	Mar. 1	Nov. 1

District No.	Average No. of Days Water Was Carried	Average Daily Amt. Diverted in Sec. Ft.	No. Acre Ft. Used From Stream	No. of Acres That Can Be Irrigated	Alfalfa	Natural Grasses
36	.....	.....	.....	*11,500	.....	.....
37	..... 161	935.50	283,125	28,266	12,276	7,676
38	..... 121	880.07	238,194	34,658	20,127	4,589
39	..... 138	407.20	223,554	29,997.5	10,575	4,392.5
45	..... 59	349.73	54,215	*36,000	16,564	5,951
50	.....	.....	.....	*21,400	.....	.....
51	.....	.....	.....	*41,100	.....	.....
52	..... 52	105.73	11,768	10,072	1,657	2,584
53	..... 138	238.30	65,817.6	17,980	4,545	8,259
70	..... 177	124.66	44,929.6	16,500	5,792	458
Totals	..... 121	3,041.19	921,603.2	247,473.5	71,536	33,909.5

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS FOR IRRIGATION SEASON OF 1937
IRRIGATION DIVISION NO. 5—Continued

District No.	Cereals	Orchards	Market Gardens	Potatoes	Sugar Beets	Beans	Peas
36	.....	.....	...	.....	.....	..	...
37	..... 3,603	.....	290	1,610	.....	..	281
38	..... 6,327	.....	...	3,615	.....	..	...
39	..... 3,627.5	545.5	255.5	1,235	1,748	17	...
45	..... 6,488	507	46	356	846	10	...
50	.....	.....	...	.....	.....	..	...
51	.....	.....	...	.....	.....	..	...
52	..... 241	.....	...	35	.....	..	...
53	..... 910	.....	...	200	.....	..	...
70	..... 1,641	62	39	132	50	10	...
Totals	..... 22,864.5	1,114.5	630.5	7,183	2,644	37	281

District No.	Cabbage	Other Crops	Total Irrigated	Superin- tendence	Repairs	Improvements
36	*8,400	.....	.....	.....
37	16	25,779	.....	\$20,572	.....
38	34,658	.....	.....	.....
39	269.5	22,698.5	\$ 2,500	13,412	\$ 2,084
45	..... 1	557	31,326	.....	.....	.....
50	*9,100	.....	.....	.....
51	*22,180	.....	.....	.....
52	4,517	.....	1,454	.....
53	355	13,895	80	2,225	.....
70	15	8,199	.....	2,590	125
Totals	..... 1	1,212.5	180,752.5	\$ 2,580	\$40,253	\$ 2,209

*Estimated by Division Engineer.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER OF IRRIGATION DIVISION NO. 5 FOR THE SEASON OF 1938

Glenwood Springs, Colo., November 30, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

In compliance with the provisions of the law, I transmit herewith my annual report as Division Irrigation Engineer for Irrigation Division No. 5 for the year ending November 30, 1938.

Administration

The Irrigation season just completed is no doubt the best that this division has had in ten years. As proof of this I have selected the Lux Cran ditch, a junior right out of Beaver Creek. This season the Lux Cran ditch carried 40% as much as the total amount carried by this ditch in the previous eight years. Most other ditches in this division show a similar increase over previous years.

A number of investigations of reservoir sites were made this past season by the Division Engineer at the request of farmers and a few very good small reservoir sites were found and it is hoped that construction of some of them will be begun next spring.

The administration of water rights in District No. 39 has been greatly improved this season by the installation of many new headgates and Parshall flumes. About 90% of all the ditches in District No. 39 are now equipped with Parshall flumes.

During the season the Division Engineer traveled an average of about 393 miles per month, for a total of 4,717 miles. He also traveled about 120 miles by horseback during the past season.

Administration Costs

Cost of administration of Division No. 5 for the year 1938 was \$6,700.00. This includes salaries of all commissioners and their deputies. One hundred thirty-eight thousand nine hundred eighty-one acres were irrigated at a cost of .041 cents per acre for services of water commissioners and their deputies.

Dist. No.	Acres Irrigated	Commissioners' Fees	Deputies' Fees
37	28,134	\$ 582.00	.....
38	36,438	522.00	\$ 300.00
39	18,556	1,104.00	50.00
45	30,640	882.00	1,440.00
52	4,699	144.00	.....
53	12,015	84.00	590.00
70	8,499	1,002.00	.....
Totals	138,981	\$4,320.00	\$2,380.00

Precipitation and Temperatures

Following are the temperatures and precipitation as recorded at Rifle and Glenwood Springs during the growing season. A comparison has been made of the precipitation for the past four seasons, from which it will be noted the 1937 season had a more even distribution than in 1935, 1936, and 1938.

In June, July and August, 1937, Rifle had a total precipitation of 3.04. In the same months of 1938 the total precipitation was 1.53, a difference of 1.51, about one-half as much as in 1937, although this is not a great deal of moisture it did have considerable effect on the growing crops, and if we had not had a good run of water from the streams this year we would have had many crop failures due to the very dry condition during the above mentioned months.

Temperatures in 1938 have been about normal and do not show as great a range between high and low as they did in 1937.

RIFLE

	May	June	July	Aug.	Sept.
Maximum Temp.....	88	90	97	99	84
Minimum Temp.....	23	39	43	38	36
	May	June	July	Aug.	Sept.
Total Precipitation 1938.....	1.10	.77	0.31	0.45	1.71
Total Precipitation 1937.....	.25	.33	2.17	.54	.71
Total Precipitation 1936.....	..	.05	1.54	1.50	.45
Total Precipitation 1935.....	1.95	..	.90	.32	1.01

GLENWOOD SPRINGS

	May	June	July	Aug.	Sept.
Maximum Temp.....	87	89	97	96	89
Minimum Temp.....	25	39	43	38	17
	May	June	July	Aug.	Sept.
Total Precipitation 1938.....	2.53	3.45	0.45	1.44	2.14
Total Precipitation 1937.....	1.15	0.92	4.51	2.31	.96
Total Precipitation 1936.....	0.49	0.63	2.06	1.65	1.09
Total Precipitation 1935.....	2.54	0.50	0.88	1.46	2.89

Snowfall

Snowfall over the entire division the past season was estimated to be about normal, due to the heavy snowfall in the high mountain areas. The streams this season have held up better and we have had a better runoff this season than in the last eight or ten years.

Hail

Very few hail storms of any consequence were reported this year, and the damage to crops was very little from this source.

Floods

Several cloudbursts occurred in District No. 70 and in the Rifle section of District No. 39 this season, causing some damage to fields and destroying a number of dams and head-gates, also filling many ditches with sediment.

Crops

The principal crops grown in this division are natural hay, alfalfa, sugar beets, potatoes, oats, barley and wheat.

While high yields have been obtained in some cases the average yields prevailing within the division this season, with the exception of potatoes, have been about normal.

Potatoes

The potato acreage in the division this year shows 6,838 acres, a decrease of 345 acres over last year. The yield per acre last year was below normal and this year the yield is somewhat below that of last year. As the weather condition was almost ideal in the division this year for the production of potatoes, there is a number of different ideas among the farmers as to just why the production has been poor this year.

Although the yield this season has been much below normal, the potato market is much better than last year and the farmers have made more from potatoes this season than in the past several seasons.

Sugar Beets

The sugar beet acreage in the division this year shows 2,072, a decrease of 572 acres from last year. Most of the sugar beet acreage is located in the Rifle vicinity of Districts No. 39 and 45. The large decrease in acreage was caused by the farmers and sugar company not being able to come to terms on beet contracts until late last spring, consequently many farmers did not raise beets this season.

Native Hay and Alfalfa

The hay crop in this division was very good this year. Many localities report that this was the first year in ten years that they had cut a third cutting of alfalfa. The yield per acre being more and of a better quality than it has been for several years. But due to the cattle market being very good this fall and many cattle men selling more cattle this year than in previous years and also due to the late fall and mild weather conditions it looks now as if there will be little market for the hay.

Cereals

Wheat, oats, barley and corn yields have been about normal this year but the cereal markets have been very discouraging this fall.

New Work and Improvements

A number of improvements in ditches and diversion dams have been made this season under the direction and assistance of the division engineer.

Parshall Measuring Flumes

During the season 94 new Parshall measuring flumes of various sizes were placed in this division. There were 20 placed in District No. 38; 68 in District No. 39; four in District No. 45; four in District No. 70.

Municipal Water Supply

The town of Eagle, which gets its water supply from Brush Creek in District No. 37, installed 5,800 feet of new 10 and 12-inch steel pipe line, to replace an old pipe line that was in very poor condition. The cost of this installation was about \$10,000.00.

Trans-Mountain Diversion

Following is a report of the trans-mountain diversions from Division No. 5 to Divisions No. 1 and 2:

Division No. 1

Grand River.....	25,114 Ac. Ft.
Berthoud	778 Ac. Ft.
Moffat Tunnel.....	44,201 Ac. Ft.
East Hoosier.....	501 Ac. Ft.
West Hoosier.....	157 Ac. Ft.
Boreas Pass.....	276 Ac. Ft.
	<hr/>
	71,027 Ac. Ft.

Division No. 2

Twin Lakes Tunnel.....	46,712.79 Ac. Ft.
Busk-Ivanhoe Tunnel.....	5,557.88 Ac. Ft.
Ewing Ditch.....	1,410.48 Ac. Ft.
Wurtz Ditch.....	2,606.74 Ac. Ft.
Columbine Ditch.....	1,797.12 Ac. Ft.
Fremont Pass Ditch.....	1,668.80 Ac. Ft.
	<hr/>
	59,753.81 Ac. Ft.
Grand Total.....	130,780.81 Ac. Ft.

Yours very truly,

L. C. FINLEY,
Division Engineer.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS FOR IRRIGATION SEASON OF 1938,
IRRIGATION DIVISION NO. 5

District No.	No. of Ditches Reported	Amount of Appropriation Cu. Ft. Per Sec.	Capacity of Canal	Length of Main Ditches in Miles	First Day Water Was Used	Last Day Water Was Used
36.....	...	.....	.....	.....	.....	.....
37.....	224	1,820.91	1,803.89	365.00	May 15	Nov. 1
38.....	136	944.62	1,325.30	185.10	May 1	Oct. 15
39.....	127	593.09	696.80	223.75	Apr. 1	Oct. 31
45.....	113	667.92	886.10	223.00	Mar. 20	Oct. 14
50.....	...	.....	.....	.....	.....	.....
51.....	...	.....	.....	.....	.....	.....
52.....	88	133.18	302.50	43.65	Apr. 20	Oct. 10
53.....	60	262.37	.....	66.80	Apr. 20	Oct. 25
70.....	61	142.95	295.00	81.25	Apr. 1	Oct. 29
Totals.....	809	4,565.04	5,309.59	1,188.55	Mar. 20	Nov. 1

District No.	Average No. of Days Water Was Carried	Average Daily Amt. Diverted in Sec. Ft.	No. Acre Feet Used from Stream	No. of Acres That Can Be Irrigated	Alfalfa	Natural Grasses
36.....	...	.....	.....	*11,500	.....	.....
37.....	152	940.50	283,845	31,435	12,021	11,296
38.....	123	932.05	248,818	36,438	21,332	5,140
39.....	128	349.70	104,634	23,956	8,575	3,346
45.....	80	417.73	75,094	38,718	16,167	5,815
50.....	...	.....	.....	21,400	.....	.....
51.....	...	.....	.....	41,100	.....	.....
52.....	46	146.33	14,474	9,937	1,747	2,570
53.....	124	208.95	55,972	15,773	3,655	7,250
70.....	147	156.08	48,906	17,260	5,721	659
Totals.....	114	3,151.34	831,743	247,517	69,218	36,076

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS FOR IRRIGATION SEASON OF 1938,
IRRIGATION DIVISION NO. 5—Continued

District No.	Cereals	Orchards	Market Gardens	Potatoes	Sugar Beets	Beans	Peas
36 .....	...	...	...	...	...	...	...
37	4,718	...	280	1,551	...	10	245
38	6,619	...	...	3,347	...	...	...
39	3,438	432	344	1,141	1,263	5	...
45	6,450	489	65	489	719	...	...
50 .....	...	...	...	...	...	...	...
51 .....	...	...	...	...	...	...	...
52	354	3	...	25	...	...	...
53	400	...	5	185	...	...	...
70	1,499	38	57	100	90	241	...
Totals	23,478	962	751	6,838	2,072	256	245

District No.	Other Crops	Lettuce	Total Irrigated	Superin- tendence	Repairs	Improve- ments
36 .....	...	..	*8,400	.....	.....	.....
37	16	..	28,134	.....	\$20,477	.....
38 .....	...	..	36,438	.....	.....	.....
39	15	..	18,556	\$ 2,500	18,405	\$ 1,838
45	446	..	30,640	.....	2,544	1,200
50 .....	...	..	*9,100	.....	.....	.....
51 .....	...	..	*22,180	.....	.....	.....
52 .....	...	..	4,699	.....	1,224	.....
53	380	55	12,015	.....	1,850	.....
70	18	..	8,499	.....	2,410	75
Totals	875	55	178,661	\$ 2,500	\$46,910	\$ 3,113

*Estimated by Division Engineer.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER
OF IRRIGATION DIVISION NO. 6 FOR THE
SEASON OF 1937

Steamboat Springs, Colorado, November 30, 1937.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

Following is a brief report of administration in Irrigation Division No. 6 for the year 1937, and a general outline of activities, climatological and crop conditions together with a tabulation of water commissioners' annual ditch and reservoir reports.

The first call for water for direct irrigation was reported from District No. 58 on April 1, such date being about the average of a few scattered demands. The heavy demand being April 15 to May 1 and continues to August 30. Some direct irrigation was applied and continued to October 30. This was a general practice where water was available.

Storage was discontinued in all reservoirs affecting prior direct rights on May 1, and such reservoirs were again allowed to start storing water Nov. 1.

Due to a cold and late spring, the irrigation water for direct application held up better than the average year.

Snow scale readings on April 30 showed about 90% of normal and about 60% of the previous year.

Administration problems were not of a serious or complicated nature, only requiring constant attention during the heavy demand for direct irrigation.

District No. 44 started out this season with a new water commissioner who commenced his duties on April 24, such date being the first demand for water in said district. He was continually employed on the work thereafter, and got along very well with his administration affairs.

In District No. 58 the water commissioner was not ordered out until May 1. A change in water commissioner in this district was made on August 1, Mr. Wilbur Rule replacing the former commissioner, E. H. Godfrey. It was found necessary to bring charges with the Civil Service Commission for the removal from office of Mr. Godfrey, such charges being filed on June 25. Mr. Godfrey resigned without requesting a hearing.

Since the vacating of the office of water commissioner by Mr. Godfrey, the administration in District 58 has been running along smoothly. Prior to this date there had been many complaints from the water users.

Preparations are well under way for general adjudication to be held for District 43 this fall; however, to date, this office has not received a copy of the decree. Among other things there is to be included with the adjudication a provision to increase the quantity of water to all ditches, a re-survey of acreages, etc.

The administration in District No. 43, the past season, was handled very efficiently by the water commissioner with the assistance of two deputies. In order to get a more accurate record of crops and acreages in this district for this season, the Water Commissioner has requested an extension of time in order that he might have an opportunity to take such data from the recent information furnished the court for the revised adjudication.

Climatological Conditions During the Irrigation Season

There was a deficiency in temperature in April on the upper Yampa River, which was quite general throughout the Division. Frost injuries were reported, grass and hay slow to start, the supply of natural surface moisture was definitely below normal.

Precipitation was below normal in May. Low temperatures continued retarding the starting growth of crops. However, irrigation water was sufficient for current needs in practically all sections.

Deficiencies in temperature still prevailed in June with an average above normal precipitation.

A decided change in temperature conditions started in July and a pronounced deficiency in precipitation, both of which at this time were an advantage and favorable to growing crops. Insufficient moisture, however, became acute early in July, streams lowered to such an extent as to necessitate the closing off entirely of many junior water rights in all districts.

August continued with above normal temperature, while precipitation averaged considerable below normal. The hay crops were well advanced and matured by the close of the month. This crop, with but few exceptions, had sufficient irrigation water, the shortage therein being caused by the late, cold spring and slow starting of the growth.

Excess temperature continued throughout September. Heavy rains during the first week were beneficial to pastures, late grains, etc. The warm weather which followed was favorable for the harvesting of lettuce and vegetables and for the threshing of grain. During the last week of September, a killing frost was injurious to potatoes, the remaining lettuce crops and other vegetables. The harvested grain was well matured and did not appear to be affected.

Temperature was also above normal and precipitation below normal in October. This was a favorable condition for the continuation of harvesting and threshing. All potato crops were

harvested and stored, and threshing completed. The harvesting and threshing of grain is now accomplished more readily by the use of combines which have just this year been used extensively. The combines save considerable on former losses caused by leaving the grain remain in the field until the threshing outfit could get to them. At the close of this month the soil was dry, and in most sections the winter grains were sown under unfavorable moisture conditions. It is not felt, however, that this will materially affect the crop for next year.

It is reported by various farmers that their hay crop is 15 to 25 per cent short due to conditions in the spring.

All grains showed an exceptionally good yield per acre and were also above average in quality.

That portion of the potato and grain crop irrigated is a very small percentage of the total. These crops, therefore, do not show very heavy on the water commissioners' reports.

The lettuce and vegetable crop season's shipments from the Yampa district, showed lettuce, 119 cars; spinach, one car; mixed vegetables, 29 cars; with an estimate that about 25 carloads of lettuce, spinach, and carrots were trucked out. Market was fair and demand good. Price for lettuce, \$1.00 per crate; spinach, 1c per pound, net, to growers. It is believed that there will be quite an increase in acreage next year of these crops.

The water commissioner of District No. 43 states that the water supply for the season was below normal, but no serious conditions resulted thereby. Dry fall weather required irrigation of ground before it could be plowed; otherwise it was a good fall for harvesting conditions.

Respectfully submitted,

B. T. CHASE,

Irrigation Division Engineer, District No. 6.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORT FOR THE IRRIGATION SEASON OF 1937

Dist. No.	Amt. of Appropriation Cu. Ft. Per Sec.	Capacity of Ditches in Sec. Ft.	Length of Main Ditches in Miles	First Day Water Was Used From Natural Stream	Last Day Water Was Used From Natural Stream	Average No. Days Water Was Diverted From Natural Streams
43	599.43	1,284.52	232.84	4- 1	9-10	56
44	292.88	443.70	138.75	4- 5	8-20	48
54	69.98	135.00	.....	4-25	9- 5	64
55 and 56		No Water Commissioners				
57	300.69	406.50	155.00	4- 1	11-20	100
58	847.24	1,554.13	234.55	4- 1	9-30	90
Totals	2,110.22	3,823.85	761.14	4- 1	11-20	60.5

Dist. No.	Average Daily Amt. of Water Diverted During Season From Natural Streams	No. of Priorities Reported	No. of Acre Feet Used by Ditches for Season From Natural Streams	Total No. of Acres That Can Be Irrigated	Alfalfa	Natural Grass
43	656.75	111	107,865	31,666	12,959	7,668
44	177.99	83	23,248	14,675	7,482	4,915
54	123.98	49	16,459	7,040	1,090	3,755
55 and 56		No Water Commissioners				
57	188.78	80	110,254	15,675	707	11,837
58	662.24	290	128,953	48,843	603	34,822
Totals	1,809.74	613	386,778	117,899	22,841	62,997

Dist. No.	Cereals	Orchards	Market Gardens	Potatoes	Lettuce	Beans
43	2,615	..	..	..	..	..
44	1,970	..	..	30	..	..
54	125	..	..	38	..	..
55 and 56		No Water Commissioners				
57	79	..	..	..	..	..
58	1,502	53	114	293	551	1
Totals	6,291	53	114	361	551	1

Dist. No.	Peas	Cabbage	Other Crops	Total Irrigated	Repairs	Improvements
43	..	..	1,055	24,297	.....	.....
44	..	..	..	14,397	\$4,190.00	\$1,075.00
54	..	..	..	5,008	.....	3,566.00
55 and 56		No Water Commissioners				
57	..	..	..	12,623	545.00	175.00
58	9	12	..	37,959	555.00	.....
Totals	9	12	1,055	100,575	\$5,290.00	\$4,816.00

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
RESERVOIR REPORT FOR THE IRRIGATION SEASON OF 1937

Dist. No.	No. of Reservoirs Reported	Capacity in Cubic Feet	Quantity of Water in Reservoir May 1 Cubic Feet	Quantity of Water in Reservoir Nov. 1 Cubic Feet
43	4	14,897,918	5,903,177	.....
44	2	4,660,920	2,352,240	.....
54	2	18,791,032	18,436,400	.....
55 and 56	No Water Commissioners			
57	18	166,491,676	88,088,206	.....
58	22	184,966,534	92,640,279	11,598,247
Totals	50	389,808,080	107,420,304	11,598,247

Dist. No.	First Day Water Was Used From Reservoir	Last Day Water Was Used From Reservoir	Average No. of Days Water Carried From Reservoir	Av. Daily Amt. of Water Carried From Reservoir in Cu. Ft. During Season	No. of Ac. Ft. of Reservoir Carried During Season
43	6-16	6-30	12	5.00	128
44	7- 1	7-28	28	1.00	56
54	7- 6	7-30	15½	7.00	492
55 and 56	No Water Commissioners				
57	5- 3	7-26	27½	1.07	269
58	6- 1	10-24	12	36.56	1,657
Totals	5- 3	10-24	19	50.63	2,602

Dist. No.	Alfalfa	Natural Grasses	Cereals	Other Crops	Total Irrigation
43	60	..	..	..	60
44 .....	..	..	20	..	20
54 .....	..	20	..	..	20
55 and 56	No Water Commissioners				
57	100	90	..	..	190
58	55	150	70	..	275
Totals	215	260	90	..	565

REMARKS

District No. 43—Three reservoirs supplement supply to ditches, data on Ditch Report.

District No. 44—Water Commissioner did not obtain sufficient data to include all reservoirs on this report and only about 10% shown here.

District No. 54—Principal use supplemental to ditches shown on Ditch Report.

Districts Nos. 55 and 56—No Water Commissioners.

District No. 57—Six reservoirs either not used or used only for stock purposes, three reservoirs cannot be used.

District No. 58—Reservoirs used principally to supplement ditch flow such acreage appearing upon Ditch Report.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER
OF IRRIGATION DIVISION NO. 6 FOR THE
SEASON OF 1938

Steamboat Springs, Colorado,
November 29, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

In compliance with the provisions of the statute, I herewith transmit my annual report for Irrigation Division No. 6 for the year ending November 30th, 1938, which includes a tabulation of the water commissioners' annual ditch and reservoir reports, and reports on water supply, rainfall and temperature conditions in relation to crop production for 1938.

The past irrigation season was very favorable from the standpoint of water supply, seasonable rains and temperature conditions.

The water in storage on May 1st was below normal. However by June 1st all major reservoirs were well filled and some reservoirs which are used for supplemental irrigation were not drawn upon. Such storage will be carried over for next year's needs.

On the Yampa and White River watersheds, the average record for seven snow courses showed for April:

Snow Reading	Water Content
1936—32.4 inches.....	17. inches
1937—46.4 inches.....	18.4 inches
1938—35.0 inches.....	16.4 inches

Both snow depth and water content for 1938 were less than for the two preceding years. However, due to late snows and well distributed heavy rainfall during the 1938 irrigation season, the water supply was far more favorable than in 1937.

Temperature

Decidedly milder temperatures than are usually expected for January and February were recorded in the counties of the White and Yampa River valleys which caused packing of snow at the higher altitudes with very little resulting melting or runoff at the time.

Approximately normal temperatures were recorded in March. April opened with severe cold weather. Heavy snows were recorded in the watersheds and below normal temperatures were recorded during this period. For the month the average was slightly above normal.

Temperatures during the month of May were nearly normal. Conditions were very good for planting. June averaged slightly in excess of normal. July slightly below normal. Growing conditions, however, were good. August was warmer than normal which was excellent for crop maturity. Hail storms over scattered areas, however, caused damage to lettuce, grain and hay.

Precipitation

The rainfall in May, while about 30% above normal, was of considerable benefit as it prolonged the application of irrigation water in general. The month was favorable for all crops.

While precipitation was slightly above normal in June, the distribution of rainfall together with high temperatures were beneficial to both irrigation and dry farming.

The distribution of rain during July was generally favorable for growing crops. Light damage by hail was reported in scattered areas. The precipitation in general during August was slightly below normal. Heavy local rains and hail in some sections were destructive to crops in such areas rather than beneficial. Precipitation in September averaged considerable above normal. Heavy rains during the early part of the month were generally beneficial to pasture, soil preparations, etc., but were not needed and were detrimental to most crops. The continuous rainy weather during most of the month was the direct cause of loss to hay and grain crops. Unfavorable wet weather conditions continued mostly through October, which interfered with most of the harvesting and threshing.

Crops

Crop reports for the Yampa District for season of 1938 shows lettuce shipped, 165 cars. Mixed vegetables, mostly lettuce and spinach, 23 cars; an additional 25 cars of spinach and 10 cars of lettuce were shipped by truck. The average price this year was about 50 cents per crate to grower.

On account of the long rainy period in August, 200 acres of the lettuce crop was damaged considerably; the total crop should have been not less than 300 cars.

Potato cellars have been constructed at the principal shipping points in Yampa valley, of which five cellars are of 25 carload capacity each. The location, capacities and contents of these cellars are as follows:

Location	Capacity	Contents
Yampa	12 carloads	½ Full
Sidney	25 carloads	Full
Hayden	25 carloads	Full
Craig		Only 2 to 3 carloads

Total, 65 carloads of potatoes in storage, which constitutes the potato crop in the valley in storage. Several carloads have been shipped, which are not included in the above. There are some scattered cellars of smaller capacities. Potatoes have netted the grower 85 to 90 cents per hundredweight.

The principal irrigated crops in the division are timothy and clover, of which there are about 63,000 acres. These crops will average in normal years three tons per acre. The average price is \$5.00 per ton, fed out to stock. The total value of this crop, annually, is \$945,000.

While the crop, this year, was normal in all respects, prior to cutting, hail and heavy rains during August damaged some sections 20%. These conditions, combined with rainy weather during September, resulted in serious damage to the hay as well as to cereals. While such damage can only be estimated, it is quite probable that a 25 to 35% loss to hay growers is caused by rain in the early fall.

About 50% of the hay in the valley was stacked before wet weather damaged the crop.

A number of the hay producers planned to bale their crop for shipment, which would bring them \$12.00 to \$14.00 per ton. The damaged hay, however, could not be baled so that the loss was considerable.

The cost of administration by water commissioners and deputies for 1938 was \$3,952.00. A total of 552 ditches and 51 reservoirs were reported as irrigating 87,961 acres, out of an approximate total of 790 ditches and 102 reservoirs supplying water to 125,497 acres, making a unit cost, this year, of two and seven-tenths cents per acre for administration.

The following table shows administration costs by districts reporting in 1938.

Dist. No.	Amt. Received by Commissioner	Acreage Under Ditches Adm.	No. of Ditches	No. of Reservoirs
43	\$ 670.00	8,648	44	5
44	990.00	22,876	120	7
54	288.00	5,977	44	2
57	936.00	12,392	58	20
58	1,068.00	39,068	256	17
Totals	\$3,952.00	87,961	522	51

Attached hereto are tabulated statements of Water Commissioners' ditch and reservoir reports.

Yours very truly,

B. T. CHASE,
Irrigation Division Engineer, Division No. 6.

TABULATION WATER COMMISSIONERS' ANNUAL DITCH REPORT 1938

Dist. No.	No. of Ditches Reported	No. of Priorities	Amt. of Appropriation Sec. Ft.	Capacity of Ditches Sec. Ft.	Length of Main Ditch Miles
43	44	50	*	*	.....
44	120	85	364.36	640.80	169.00
54	44	31	77.15	167.50	.....
57	58	82	301.79	421.00	155.00
58	256	325	1,058.67	1,486.75	266.00
Totals	541	582	1,859.95	2,716.05	590.00

*Water Commissioner's report for 1938, District No. 43, could not be used for tabulations as he did not include the daily amount of water carried.

Dist. No.	Length of Laterals Miles	First Day Water Was Used	Last Day Water Was Used	Average No. Days Water Carried	Average Daily Amount Carried Sec. Ft.
43	.....	4- 5	9-20	63	347.85
44	338.75	5- 1	8-20	51	93.18
54	.....	4-15	10-28	77	209.99
57	8.00	4- 1	8-31	86	735.08
Totals	346.75	4- 1	10-28	69	1,386.10

Dist. No.	No. of Acre Feet Used	No. of Acres That Can Be Irrigated	Alfalfa	Natural Grass Timothy and Clover	Cereals
43	.....	23,052	10,916	6,830	3,110
44	44,033.27	8,920	1,435	4,340	165
54	11,021.00	16,099	555	11,308	39
57	47,487.80	43,704	403	33,862	2,104
58	123,221.97	.....	.....	.....	.....
Totals	225,764.04	91,775	13,309	56,340	5,418

Dist. No.	Market Gardens	Pasture	Potatoes	Lettuce	Spinach
43	.....	.....	.....	.....	.....
44	.....	.....	.....	.....	.....
54	.....	.....	37	.....	.....
57	.....	.....	.....	.....	.....
58	38	1,619	222	140	31
Totals	38	1,619	259	140	31

Dist. No.	Onions	Other Crops	Total Irrigated	Repairs	Improvements
43	.....	.....	20,836	\$ 6,515.00	\$ 1,318.00
44	.....	.....	5,977	5,500.00	.....
54	.....	.....	11,903	2,685.00	165.00
57	.....	.....	38,537	3,670.00	1,120.00
58	10	108	.....	.....	.....
Totals	10	108	77,272	\$18,370.00	\$ 2,603.00

REMARKS

Fall irrigation by nearly all ditches, Sept. 15 to Nov. 1st. Such diversions not included in these reports.

TABULATION WATER COMMISSIONERS' ANNUAL RESERVOIR
REPORTS

Dist. No.	No. of Reser- voirs Reported	Area of High Water Line, Acres	Capacity Cubic Feet	Quantity of Water in Reser- voirs May 1
43	4	30	14,896,918	14,896,918
44	7	175	22,121,070	22,121,070
54	2	58	18,760,972	9,411,646
57	20	354	152,304,885	66,026,750
58	17	427	208,272,970	105,627,544
Totals	50	1,044	316,356,815	218,083,928

Dist. No.	Quantity of Water in Reservoirs Nov. 1	First Day Water Used	Last Day Water Used	Number of Days Water Carried
43	Empty	6-16	7-30	25
44	Empty	5- 4	7-22	12
54	Empty	7-15	8-15	16
57	19,215,465	5-25	8-16	32
58	8,653,230	6- 1	10-23	30
Totals	27,868,695	5- 4	10-23	26

Dist. No.	Average Daily Amount Carried	No. of Acre Feet Reservoir Water Used	Alfalfa	Natural Grass	Cereals
43	11.00	548.00	508	40	...
44	20.20	508.00	520	285	215
54	4.50	207.00	Reported on Ditch Report		
57	7.88	616.49	...	490	...
58	32.48	2,076.04	50	377	40
Totals	76.06	3,955.53	1,078	1,192	255

Dist. No.	Potatoes	Lettuce	Total Irrigated	Repairs
43	..	..	548	.....
44	..	..	1,020	\$300.00
54	Reported on Ditch Report			
57	..	..	490	.....
58	30	34	531	.....
Totals	30	34	2,589	\$300.00

Flood Survey

A flood report was prepared by me for the Army Engineers concerning flood damage and water conservation needs in the section of the Yampa River basin in Routt County. The report contains the following information:

The area in question is not subject to floods caused by cloud-bursts or heavy rains of long duration; it is the heavy spring runoff from the melting snow.

The affected flood area as shown on Plate A includes 27 miles of the Yampa River from the county line to the mouth of the Elk River, 26 miles from the mouth of Elk River to Yellow Jacket Reservoir site and 22 miles in the Elk River valley. A total of 75 miles, such area described and that which is each year menaced by flood damage has an average width of one-fourth mile, or a total area of 19 square miles or 12,000 acres, all developed and producing hay land valued at \$50.00 per acre average, or a total of \$600,000 of producing land menaced by uncontrolled flood waters.

The precipitation on the headwaters of the Yampa and Elk Rivers within Routt County in the form of stored snow has an average water content of about 25 inches. Runoff therefrom occurs mostly during the period May 15th to June 15th, or approximately 30 days, during which storage for flood regulation and the conservation of water for irrigation and power would occur.

On Plate A are shown the location of stream gaging stations. (Note: Plate A is drainage map of Irrigation Division No. 6.)

No. 1—Yampa River at Maybell has a drainage area of 3,670 square miles.

No. 2—Yampa River at Steamboat Springs, 500 square miles.

No. 3—Elk River at Trull, 415 square miles.

Total No. 2 and No. 3—915 square miles, or 25% of the drainage area at Maybell.

The average maximum flow for 24 hour periods at the above mentioned stations for the months of May and June, 1917, 1918, and 1921 and 1922, are herein tabulated to illustrate comparative results of runoff with respect to drainage areas.

Table No. 1

DISCHARGES IN CUBIC FEET PER SECOND

	No. 1 Elk-Trull	No. 2 Yampa- Steamboat	No. 1 & 2 Both Trull Steamboat	No. 3 Yampa- Maybell	Rest of Drainage Area
1917—May	4,280	3,500	7,780	12,300	4,720
June	4,280	4,730	9,730	15,300	5,740
1918—May	2,830	2,840	5,670	7,420	1,750
June	5,000	4,730	9,730	10,100	370
1921—May	4,880	4,510	8,990	14,400	5,410
June	5,350	5,870	11,220	16,600	3,840
1922—May	3,800	2,960	6,760	10,600	5,380
June	3,460	2,580	6,040	8,780	2,740

Sixty-six per cent of the high water runoff during the months of May and June, from a drainage area of 3,670 square miles, is from area within Routt County, containing 915 square miles, which includes the Yampa and Elk Rivers and tributaries above their confluences.

Table No. 2

Mean average discharge in acre feet by months of Yampa River at Steamboat Springs, 1904-1926. Total means 370,000 acre feet.

October	9,200	
November	7,760	
December	6,330	
January	6,220	
February	6,000	
March	12,000	
April		41,000
May		118,000
June		122,000
July	23,200	} Water conservation and flood regulation period.
August	9,840	
September	7,530	
	88,820	281,000

Equalization average 30,883 acre feet per month.

Table No. 3

Mean average monthly discharge in acre feet of Elk River at Trull, 1904-1906. Total mean 364,650 acre feet.

October	9,590	
November	4,890	
December	4,610	
January	4,610	
February	4,440	
March	9,920	
April		60,100
May		119,000
June		111,000
July	24,800	} Water conservation and flood regulation period.
August	7,380	
September	5,010	
	75,330	290,100

Equalization average 30,388 feet.

Table No. 4

Mean average monthly discharge in acre feet of Yampa River at Maybell, 1904-1906. Total means 1,280,000.

October	28,900	
November	23,800	
December	20,900	
January	18,500	
February	19,700	
March	45,900	
April		162,000
May		441,000
June		378,000
July	96,300	} Water conservation and flood regulation period
August	28,500	
September	21,000	
	312,800	981,000

Equalization average 99,400 acre feet.

Table No. 5

Mean average monthly discharge in acre feet of Yampa River at Maybell and the combined Elk and Yampa at Steamboat Springs, 1904-1926.

	Yampa-Maybell Drainage Area 3,670 Sq. Mi.		Elk and Yampa Combined Drainage Area 915 Sq. Mi.		Remainder of Yampa River Area 2,735 Sq. Mi.
October	28,900		18,830		10,070
November	23,900		12,650		11,150
December	20,900		10,940		9,960
January	18,500		10,830		7,690
February	19,700		15,920		3,780
March	45,900		22,620		23,280
April		162,000		101,100	60,900
May		441,000		227,000	214,000
June		378,000		233,000	145,000
July	96,300		48,000		48,300
August	28,800		17,220		11,280
September	21,000		12,840		8,500
Totals	312,800	981,000	169,550	561,100	

The maximum recorded flow of 17,300 second feet in the Yampa River at Maybell was on May 19, 1917.

The principal tributaries contributing to flood conditions in the area under discussion and on which flood control measures would be necessary to protect areas on the main streams, are the Yampa River above flood area as shown on Plate A, Morrison Creek, Sarvis Creek, Walton Creek, Fish Creek and Soda Creek, tributaries of Yampa River, and on Elk River above the flood area, and on Mad Creek and Deep Creek, Big Creek, tributaries

of the Elk, all as shown in green on Plate A. On each of the mentioned streams, reservoir sites are available that could be utilized for the control and equalization of flood water for the protection of life and property, for the conservation of water for irrigation and the development of power.

Present water conservation and uses on Yampa River and tributaries within Routt County:

Water District	No. of Ditches	Average Amount of Diversions	Acreage Irrigated
District 57.....	114 ditches	423 cfs.	16,294 acres
District 58.....	397 ditches	1,490 cfs.	49,814 acres

Totals	511 ditches	1,813 cfs.	66,108 acres
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Irrigation and ditches diverting water within area under discussion.

	Ditches	Diversion cfs.	Acres Irrig.
Yampa River from county line to mouth of Elk.....	21	158.75	6,200
Yampa above Elk to Yampa.....	33	127.34	6,640
Elk River to Clark.....	35	134.08	7,300
Totals	89	420.17	20,140

Present reservoirs and capacities located on tributaries to Yampa River in Routt County:

	No. of Reservoirs	Storage Capacity in Acre Feet
District 57.....	28	3,496
District 58.....	23	3,307
Totals	51	6,805

Valuation of land as annually assessed since 1928, in area along river bottom irrigated meadow land, from Routt County line west to and including Pleasant Valley on Yampa River and to Clark on Elk River.

	Average
1928	\$50.00
1929	50.00
1930	50.00
1931	50.00
1932	50.00
1933	40.00
1934	36.00
1935	36.00
1936	28.64
1937	28.64
1938	From \$28.00 to 33.00

The abstract of assessments for Routt County, Colorado, gives the following information for the year 1936.

Routt County population in 1930 (the last available census) was 9,352. The present population of the several towns is given where accurate information could be obtained.

Yampa	310
Phippsburg	Unknown
Oak Creek.....	1,211
Routt	Unknown
Haybro	Unknown
Sidney	Unknown
Steamboat Springs.....	1,198
Milner-MacGregor	Unknown
Mt. Harris.....	Unknown
Hayden	554
Columbine	Unknown
Hahns Peak.....	Unknown
Clark	Post Office Only

Summary of tabulation of data from reports obtained by survey of farms and towns in affected flood area, which includes 79 separate land owners, each of which reports is signed by the owner. One town report, one utility report, and one milling and elevator report. The originals of each are in the files of the office of Irrigation Division Engineer. From all data obtained and computed, the record for the period of 1917-1938 discloses the following:

Loss of lives—six persons.

Damage to Improvements	No. of Farms Reporting	Average Annual Damage	Damage Over Period 21 Years
Fences	50	\$ 1,400.00	\$ 29,453.00
Buildings	5	.....	1,300.00
Private roads and bridges.....	8	.....	13,810.00
Private retaining walls and rip-rap..	2	.....	4,900.00
No. of farms irrigated in affected area.....	74		
Total acreage irrigated claimed in reports....	13,623		
No. of farms claiming bene- fits if flood waters were controlled	56		24,820.00
Total benefits claimed.....			
Damages claimed to ditches, head- gates, dams, etc., 52 reported....		3,373.00	68,737.00
Damage to crops, 21 reported.....	(411 acres)	4,465.00	52,155.00
Damage due to silt deposits.....	10 (145 acres)	1,380.00	28,940.00
Loss due to inability to plant crops, due to high water.....	12 (334 acres)	3,660.00	81,600.00
Loss, inability to develop land, due to high water.....	15 (345 acres)	3,465.00	72,265.00
Permanent loss to land from erosion and changing of river channel..	54 (33 acres) Annually 681 acres 21 years	1,892.00	40,630.00
Loss of livestock.....	11 (10 head)	341.00	3,410.00
Claims of benefits to be derived in addition to present annual losses	16	2,134.00	44,805.00
		<u>\$ 20,150.00</u>	<u>\$470,675.00</u>

Annual total acreage loss in crops on 1,268 acres.

Colorado Utilities Corporation estimates damage to private roads in 1938 at \$750.00; also claims floods the past ten years have cost company \$7,500.00.

Yampa Valley Milling and Elevator Company, 1917-1921, damage of \$1,100.00 to ditches and headgates, etc. Claim \$1,500.00 per year would be saved company by the control of floods, in the operation of the plant.

There are 24 highway bridges and seven railroad bridges across Yampa River within flood affected area.

There are 11 highway bridges and two railroad bridges across Elk River.

Only partial data could be obtained at this time on damages caused by floods to these bridges. It is evident that the Denver & Salt Lake Railroad spends considerable sums each year for the protection of its line and bridges from damage by flood waters.

It has been necessary for the county to make several replacements of bridges in the past several years due to damage by flood waters. No figures are available, however, to show the amount of such damages.

With reference to flood control and water conservation, there is included herewith a tabulation of 27 known feasible storage projects located on Yampa River and tributaries in Routt County of an aggregate storage capacity of 501,983 acre feet.

The combined storage capacity of presently constructed reservoirs is 6,803 acre feet. Present average annual diversions by ditches amount to 200,000 acre feet. The mean annual runoff of the Yampa River area in Routt County, exclusive of Trout Creek, is 767,500 acre feet.

Plate 5 is a map of a portion of the Routt National Forest, being also a portion of Routt County instead of the full map of the county as filed with the papers at Craig, Colorado.

On this plate are shown, in blue, the various reservoir sites which have been surveyed. Those of which no survey is available, are shown in yellow.

Tabulation of Reservoir Sites Not Constructed

COLORADO RIVER FLOOD CONTROL—YAMPA RIVER, ROUTT COUNTY, COLORADO

No. Ref. to Map Plate 5	Name of Project	Max. Ht. of Dam	Ht. of Hwl.	Length of Dam on Top	Cap. of Res. Acre Ft.	Name of Stream
1	Wessels	190	180	470	88,860	Yampa River
2	Pleasant Valley.....	110	100	550	84,000	Yampa River
3	Wessels	90	80	510	25,600	Morrison Creek
4	Wessels	110	100	440	17,250	Silver Creek
5	Alkire Fish Creek Res.	70	60	666	311	Middle Fish Cr.
6	Alkire Little Lake Res.	40	35	341	50	Middle Fish Cr.
7	Alkire Dinosaurus..	25	20	306	314	Branch N. Fork Fish Cr.
8	Merrill	85	80	232	1,007	Big Cr.
9	Three Rivers.....	70	60	325	3,084	Mad Cr.
10	Swamp Park.....	35	25	1,212	2,470	Mid. & N. Forks Mad Cr.
11	Logan Pk.....	35	30	135	516	Mad Cr.
12	Margaret	15	10	670	897	Elbert Cr.

Unconstructed Reservoirs

No. Ref. to Map Plate 5	Name of Project	Max. Ht. of Dam	Ht. of Hwl.	Length of Dam on Top	Cap. of Res. Acre Ft.	Name of Stream
13	Mirror	40	35	263	720	Elbert Cr.
14	Luna Cr.	55	50	365	5,343	Luna Cr.
15	Willow Cr. Res.	65	55	400	3,029	Willow Cr.
16	Sheriff	45	40	225	727	Trout Cr.
17	Alkire Proj.	30	70	552	9,000	Stillwater Fiodel Cr.
18	Dunkley Proj.	115	100	650	44,800	Fish Cr.
19	Hinman Pk.	220	200	550	171,500	Elk River above W. Cr.
20	Chimmy Cr.	110	100	530	6,400	Chimmy Cr. Trib. to Deep Cr.
21	Farnsworth Cr.	60	50	440	1,230	Farnsworth Cr. Trib. to Elk River
22	Sarvice Cr.	60	50	500	1,000	Sarvice Cr.
23	Upper Stillwater No. 1.	70	60	800	6,000	Yampa River
24	Lower Stillwater No. 4.	142	130	1,800	12,000	Yampa River
25	Soda Creek.	75	70	600	3,500	Soda Cr.
26	Butcherknife	55	50	400	1,875	Butcherknife
27	Trout Creek.	80	70	700	10,500	Trout Cr.

No. Ref. to Map Plate 5	Remarks	Sec., Twp. and Range
1	Of record, dyke and spillway 25 and 20, dyke-480 ave. Wessels C. M. July 7, 1909, pre. Spillway	4N 84 85W 29-39-36-31-32 3N 84N 85W 5-6-1-2
2	Of record, sur. May 8, 1910, preliminary	5N R84 27-28-32 4N R84 9-16
3	Not of record, Nov. 7, 1923	3-83-10-11-13-14-15-23
4	Not of record, Nov. 7, 1923	3-83-19-20-29-30
5	Of record, No. S 5 and 6 connected under 1-60 contour from and	3-83-9-8-4
6	under 35 on	6-83-9-4
7	Record, fava C. M.	6-83-23-26
8	Record	8-35-23-26
9	Record	8-84-21-22
10	Record	8-84
11	Record	8-84
12	Record	8-84
		Sec. 24

No. Ref. to Map Plate 5	Remarks	Sec., Twp. and Range
13	Record	8-83
14	Record	8-83
15	Record	10-85-4-10
16	Record	2-87-15
17	Not of record	5-86-28-29-31-32
18	Not of record	4-9-10-16-17-15
19	Not of record	9-85
20	Not of record	8-86-33
21	Not of record	7-86-15
22	Not of record	3-83 4-5
23	Record	
24	Record	
25	Not of record	8-6-84
26	Not of record	9-6-84
27	Not of record	15-6-86

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER IRRIGATION DIVISION NO. 7 FOR 1937

Durango, Colorado, Jan. 11, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

This is to submit the annual report for the irrigation season of 1937. This report covers the administration of water rights, water supply and stream flow data, and the tabulation of water commissioners' ditch and reservoir reports.

Administration

The diversions of water from the natural streams by canals for direct use, into and from reservoirs, was administered in accordance with the decrees in all districts where decrees have been made. In Water District No. 29, the water commissioner at large was employed for a few days only to regulate diversions by canals which take water from the small tributaries of the San Juan River near Pagosa Springs.

Deputies were employed in Districts 33 and 34 to assist in regulations of canal diversions on the La Plata and Dolores Rivers, respectively.

Water Supply

As of April 1st, the accumulated snow depth as measured at seven snow courses in the San Juan and Dolores River basins was forty-six per cent greater than existed on the same date in 1936. The measured runoff during 1937 was from three to sixteen per cent greater than during 1936.

The natural flow of the several principal streams was about twelve per cent above the yearly average. The runoff was early and by the end of May there had occurred about seventy per cent of the total yearly discharge. Eighty-five to ninety per cent had occurred by June 30. This early flow was from thirty to eighty-four per cent above the normal runoff for the months of April and May. The effect of such early runoff was the depletion of the snow supply and a deficiency of stream flow during the balance of the season.

Precipitation was deficient during April, May and June. The total accumulated deficiency during those months was two inches or fifty-five per cent of the mean. Rainfall during July was one and one-half inches or sixty per cent in excess of normal. This excess moisture came at most propitious times and made many

crops which would have failed because of the lack of stream flow for irrigation.

Warmer weather than usually occurs, was experienced during the entire season with the exception of a short period in June. Killing frosts occurred on June 10 and again on September 26, but neither were severe frosts.

Water was beneficially applied from April 11 to November 7, a period of two hundred and twelve days, while the period between frosts was one hundred eight days.

The amount of water in storage on May 1 for irrigation purposes was approximately nineteen thousand acre feet. This amount was entirely used as supplemental water on twelve thousand acres.

Crop Production

The crop yield for 1937 was one of the best of record. The heavy application of water through April and May and the early part of June made the first hay crops and carried the other crops until the rains came in July, which, combined with other favorable conditions resulted in heavy production.

Development and Improvement

There is now occurring a period of water storage or reservoir development in the San Juan Basin which is parallel to the water conservation work throughout the State. Contracts for the building of the Vallecito Dam on Pine River will soon be awarded by the Bureau of Reclamation. This is to be an earth and rock fill dam. The estimated cost is about three millions of dollars. The storage capacity is to be 129,000 acre feet, which will be more than sufficient to adequately supply the present irrigated acreage and will probably result in the irrigation of an additional thirty-five thousand acres. To provide and guarantee repayment of the costs of this project to the Bureau the Pine River Irrigation District was formed under the provisions of the 1921 Statutes of Colorado.

The Bureau of Reclamation has also made surveys and investigations of storage possibilities on the Mancos, La Plata and Florida Rivers. It is quite possible that something beneficial may come of such studies on the La Plata and Florida Rivers but the indicated cost of storage on the Mancos is too high to be considered by the landowners.

The major actual improvement during the year has been the completion of the earth dam and dike by the Summit Reservoir Company. The total cost of such improvement during the two-year period of construction has been approximately \$65,000. The funds for the greater portion of such cost was borrowed from the Reconstruction Finance Corporation and is repayable over a long period of years at a low interest rate.

The present irrigated acreage under this project is 4,000 acres. The capacity of the enlarged reservoir will be 4,900 acre feet and as partial refills of the reservoir will be made it is estimated that there will be available at least one and one-half acre foot of water per acre for lands within the system.

In general, the San Juan Basin of Colorado, though limited in irrigable acreage, is preparing to develop its water resources and may in time become one of the important agricultural sections of the State.

Respectfully,

J. R. WILLIAMS,
Irrigation Division Engineer, Irrigation Division No. 7

IRRIGATION DIVISION NO. 7

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS FOR THE IRRIGATION SEASON OF 1937

Dist. No.	Number Ditches Reported	Number of Priorities	Amount Appropriated in Cu. Ft.	Capacity of Canals in Cu. Ft.	Length of Canals in Miles	First Day Water Was Used
*29.....	220	236	589	639	48	
30.....	175	216	608	724	235	Mar. 1
31.....	66	79	818	1,039	192	May 2
32.....	40	47	232	428	63	Apr. 20
33.....	60	58	582	916	154	Apr. 11
34.....	28	16	18	42	21	Apr. 8
69.....						
Totals.....	589	652	3,047	3,838	713	Mar. 1

Dist. No.	Last Day Water Was Used	Max. No. Days Water Was Used	Average No. Days Water Was Used	Average Daily Amt. Used From Nat. Stream	No. Acre Feet Used From Nat. Stream	No. Acres That Can Be Irrigated
*29.....						43,000
30.....	Nov. 15	259	125	357	89,209	60,025
31.....	Oct. 18	170	111	551	122,421	56,710
32.....	Sept. 30	162	56	201	22,527	21,605
33.....	Nov. 7	212	98	612	120,020	73,065
34.....	Oct. 7	123	61	67	8,130	4,809
69.....						
Totals.....	Nov. 15	259	90	2,010	362,307	259,214

CROPS IRRIGATED

Dist. No.	Alfalfa	Natural Grasses	Cereals	Orchards	Marked Gardens	Potatoes
*29.....						
30.....	9,643	4,296	7,119	644	177	649
31.....	12,496	8,849	11,616	311	...	266
32.....	6,909	1,344	6,134	85	25	376
33.....	14,157	14,344	11,834	1,184	40	1,241
34.....	1,135	540	900	...	...	100
69.....						
Totals.....	44,340	29,373	37,603	2,224	242	2,632

CROPS IRRIGATED

COST, DOLLARS

Dist. No.	Beans	Peas	Other Crops	Total Irrigated	Superintendence	Repairs	Improvements
*29.....				25,000			
30.....				22,531	\$ 4,914	\$10,792	\$ 4,479
31.....	50	7	3,318	36,913	12,500	13,052	3,738
32.....				3,000			
33.....	185		396	15,454	450	1,790	1,013
34.....	1,955		1,558	46,313	36,525	...	...
69.....			65	2,760	...	1,740	...
Totals.....	2,190	7	5,337	151,971	\$54,389	\$27,374	\$ 5,232

*No report. Estimates by Division Engineer.

IRRIGATION DIVISION NO. 7

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
RESERVOIR REPORTS FOR THE IRRIGATION SEASON OF 1937

Dist. No.	Number of Reservoirs in District	Area of High Water Acres	Capacity in Cubic Feet	Amount in Storage on May 1st Cu. Ft.	Amount in Storage on Nov. 1st in Cu. Ft.
29	3	...	26,972,352	No Report	No Report
30	3	899	1,106,162,640	521,238,960	827,640,000
31	1	354	77,144,760	No Report	.....
33	1	36	25,102,540	25,102,540	0
34	5	920	774,151,420	774,151,420	7,000
Totals	13	2,209	2,009,533,712	1,320,492,920	827,647,000
Acre Feet.....			46,133	30,314	19,000

Dist. No.	First Day Water Was Used From Storage	Last Day Water Was Used From Storage	No. of Days Water Was Used From Storage Cu. Ft.	Average Daily Amt. Used from Storage Cu. Ft. Per Second	Number of Acre Feet Used From Storage	CROPS IRRIGATED (ACRES)	
						Alfalfa	Natural Grasses
30	*11-15-36	11-14-37	365	36	*26,652	400	...
31	None Used		...	...	.....	...	...
33	June 18	Aug. 29	28	8.9	499	175	...
34	Apr. 15	Sept. 15	150	59	17,770	1,550	130
Totals .	Apr. 15	Sept. 15	150	61	18,269	2,125	130

*Used by Western Colorado Power Co. for hydroelectric purposes. The totals indicate the amounts used for irrigation only.

CROPS IRRIGATED (ACRES)

Dist. No.	Cereals	Orchards	Market Gardens	Potatoes	Beans	Other Crops	Total No. Acres Irrigated
30	475	10	..	20	...	...	905
33	184	...	12	18	...	...	389
34	7,100	310	..	680	700	265	10,735
Totals	7,759	320	12	718	700	265	12,029

COST (DOLLARS)

Dist. No.	Superintendence	Repairs	Improvements
30	\$ 1,400	\$ 7,093	.....
33	No Report	.....	.....
34	1,500	390	\$ 34,170
Totals	\$ 2,900	\$ 7,483	\$ 34,170

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER IRRIGATION DIVISION NO. 7, 1938

Durango, Colorado, November 27, 1938.

Mr. M. C. Hinderlider,
State Engineer,
Denver, Colorado.

Dear Sir:

The annual report of Irrigation Division Engineer of Irrigation Division No. 7 is herewith submitted.

This report includes statements and tables of precipitation, temperatures which prevailed over the division during the growing season, accumulated snow depths at high elevations on important or principal watersheds, water supply, crops, irrigation developments and a tabulation of water commissioners' ditch and reservoir reports.

Respectfully,

J. R. WILLIAMS,
Irrigation Division Engineer.

TABLE OF PRECIPITATION 1938

Month	INCHES						
	Weather Station and Elevation						
	Durango 6,529	Cortez 6,177	Fort Lewis 7,610	Ignacio 6,425	Pagosa Springs (Near) 10,000	Silver- ton 9,415	Rico 8,832
January	1.79	1.27	1.67	0.94	6.77	1.59	2.18
February	2.64	1.51	1.48	1.74	10.78	†	2.88
March	4.87	4.33	4.23	3.56	10.40	5.69	5.81
April	0.65	0.77	0.78	1.02	†	1.66	1.27
May	1.05	0.37	0.52	0.16	†	1.92	1.57
June	1.90	1.09	2.51	1.38	†	5.08	3.93
July	0.88	0.66	0.71	0.88	†	1.44	1.22
August	0.90	1.43	1.27	0.97	†	2.11	2.82
September	2.50	2.39	2.81	2.41	†	†	3.43
Total 9 mos.	17.18	13.82	15.98	13.06	*27.95	19.49	25.11
					3 mos.	7 mos.	
Departure from normal	Plus 2.24		Plus 2.30	Plus 0.39		Plus 4.13	

*The record as shown as near Pagosa Springs was taken at the Highway Maintenance Camp on the westerly side of Wolf Creek Pass at an elevation of approximately 10,000 feet. The recorded water content of 27.95 inches was contained in 396 inches or 16½ feet of snow. There was 38 inches additional snowfall during April and May but at the end of May there were only patches of snow remaining.

†No Report.

There occurred unusual excesses of moisture in March, June and September and equally unusual or marked deficiencies occurred in April, May, July and August. At all stations for the nine month period there was an average excess of more than two inches. The excess in the form of snow during the first three months of the year at high elevations provided a deep snow cover which maintained the stream flow through the summer. The excess

in June was in the form of rain which caused very high stages of flow in most streams and was very beneficial to growing crops in the farmed areas. The record of rainfall at Cascade on the Animas watershed at a point thirty miles north of Durango was 5.32 inches and was the highest recorded in the State.

It rained during every month of the year at Durango and at comparable elevations. This was a most unusual occurrence and was very beneficial to livestock interests as there was very little accumulated snow on the ground at any time.

Snow Surveys and Water Forecasts

No.	Drainage and Snow	Local Drainage	Locality	Elev.	March 1		April 1		May 1	
					Snow Depth	Water Cont.	Snow Depth	Water Cont.	Snow Depth	Water Cont.
29	San Juan	San Juan	Wolf Cr.	10,000	85.6	25.3	127.4	41.5	77.4	37.6
30	San Juan	Animas	Silver-ton	9,400	...	...	45.0	12.1	0.0	0.0
31	San Juan	Animas	Cascade	8,850	...	...	55.3	14.5	0.0	0.0
23	Dolores	Dolores	Rico	8,700	...	...	41.7	9.6	0.0	0.0
25	Dolores	Dolores	Lizard Head	10,300	...	...	65.0	17.8	36.0	16.4

The above figures from the monthly reports by the Bureau of Agricultural Engineering and cooperating agencies. Such report under date of April 1, 1938, stated: "The greatest water content over the drainage area (Colorado River Basin) was found in the San Juan Basin where the average of four courses was 26.9 inches. On Wolf Creek Pass during March there was an increase of 16 inches in the water content of the snow."

The water content of the snow over the drainage area of the San Juan was 7.4 inches more than in 1936 and the same as in 1937, which indicated runoff equal to that of 1937. On the Dolores the water content was 3.6 inches less than in 1937, indicating about twenty per cent less runoff than in 1937.

Temperatures

The winter 1937-38 was mild in the San Juan Basin. The lowest recorded official temperature at Durango was six degrees below zero. During the growing season killing frosts were escaped over most of the crop area during June and September, during which months severe frosts sometimes occur. At high elevations, or around 8,000 feet, there was a severe frost during the last week in August.

Water Supply

As indicated by the accumulated snow cover at high elevations at the end of March the water supply or runoff during April and May was about equal to that of 1937 or slightly above the average. The heavy rains on the remaining snow in June caused runoff in excess of the average for that month and the highest flood stages which have occurred since September, 1927, but no extreme floods resulted. Which was very fortunate considering the heavy or extreme water content of the snow as shown by the snow surveys.

Crop Production

This was another or consecutive favorable year for crops. Probably the heaviest wheat yield was had that has been made for years but the low price at the mills has offset the advantages of a large yield. The hay crop was not so good as in 1937. Probably because of the low precipitation during July and August. Other crops common to the irrigated section were good.

Development

The actual construction of the Vallecito Dam on Pine River began in the early summer and has been prosecuted according to schedule until about the 20th of November, when most operations ceased for the winter because of freezing weather. The work is about one-third complete.

The La Plata and Mancos Reservoir Projects are still in the form of proposals to different governmental agencies, principally the P. W. A. and the Bureau of Reclamation, which latter agency is conducting a study of introducing water from the Animas River to the La Plata area, which comprises 35,000 acres classified as suitable for irrigation, on the east side of the La Plata. It is estimated that an area of equal size and quality lies on the west side of the river and which has not been mapped and classified. It is understood that both the Mancos and La Plata proposals to the P. W. A. have been refused or disallowed.

The Montezuma Valley Irr. Co. organized in some form to give it a municipal character, have obtained a loan and grant from the P. W. A. in the amounts of \$166,750 and \$134,250 respectively. A total of \$301,000 for the construction of the Ground Hog Reservoir or dam to impound 21,700 acre feet of water to be used as supplemental water to the direct flow in the Montezuma Valley. This water is badly needed.

The Bureau of Reclamation is studying the Dolores-Dove Creek project which will involve the building of a large dam below Dolores to impound water for the large Dove Creek area. This office is cooperating in obtaining stream flow records for the study of water supply.

There were no major developments or improvements of existing irrigation facilities. The reported costs included only superintendence, repairs or maintenance and operation.

Respectfully yours,

J. R. WILLIAMS,

Irrigation Division Engineer.

IRRIGATION DIVISION NO. 7

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
DITCH REPORTS FOR IRRIGATION SEASON OF 1938

Dist. No.	Number of Ditches Reported	Number of Priorities	Amount Ap- propriated in Cu. Ft.	Capacity of Canals in Cu. Ft.	Length of Canals (Miles)
* 29.....	220	236	589	639	48
30.....	175	223	607	734	233
31.....	65	77	686	1,349	186
33.....	40	46	292	448	68
34.....	58	106	210	904	107
69.....	31	41	156	142	23
Totals	589	729	3,240	4,216	665

Dist. No.	First Day Water Was Used	Last Day Water Was Used	Number of Days Water Used	Average Daily Amount Used	Number of Acre Feet Used from Nat. Stream	Number of Acres That Can Be Irrigated
* 29.....	No Report	No Report				* 43,000
30.....	Apr. 25	Nov. 15	228	252	114,990	70,851
31.....	Apr. 25	Oct. 31	187	364	136,260	56,911
33.....	Apr. 8	Sept. 30	148	100	29,710	24,600
34.....	May 10	Oct. 23	186	307	113,910	48,510
69.....	Apr. 13	Aug. 31	119	31	7,350	4,470
Totals.....	Apr. 2	Nov. 15	228	881	401,720	248,342

*Estimated by Division Engineer.

CROPS IRRIGATED

Dist. No.	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens	Potatoes	Beans
29.....	No Report	No Report					
30.....	9,409	4,699	7,000	657	14	558	...
31.....	12,645	8,747	11,501	212	6	292	...
33.....	6,880	1,528	6,539	95	4	289	325
34.....	13,848	8,164	11,632	1,136	181	985	1,463
69.....	1,071	694	805	16	...	35	...
Totals	43,853	23,832	37,477	2,116	248	2,159	1,845

CROPS IRRIGATED

COST (DOLLARS)

Dist. No.	Peas	Other Crops	Total Irrigated	Superin- tendence	Repairs	Improve- ments
29.....	No Report	No Report	* 25,000			
30.....	...	...	22,337	\$ 5,673	\$10,814	\$17,974
31.....	2,487	...	35,954	3,820	18,218	30,743
33.....	...	...	* 3,000	...	...	...
34.....	360	...	17,063	730	2,945	1,410
69.....	802	...	38,212	35,000	1,300	†
	110	...	2,731	0	1,095	...
Totals	2	3,759	144,297	\$45,223	\$34,372	\$50,127

*Estimated by Division Engineer.

†No report.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL
RESERVOIR REPORTS FOR IRRIGATION SEASON OF 1938

Dist. No.	Number of Reservoirs in District	Area of High Water Line (Acres)	Capacity in Acre-Feet	Amount in Storage on May 1, Acre-Feet	Amount in Storage on Nov. 1, Acre-Feet
29	3	....	619	619	†
30	3	899	25,214	8,606	19,156
31	1	354	1,770	†	†
33	1	36	576	576	0
34	5	921	15,850	12,830	3,780
69	1	16	16	16	0
Totals	14	2,226	44,045	22,447	22,936

†No Report.

Dist. No.	First Day Water Was Used From Storage	Last Day Water Was Used From Storage	Number of Days Water Was Used	Average Daily Amount Used	Number of Acre-Feet Used
29		No Report			*619
30	11- 1-37	10-31-38	220	64.2	28,038
31		None Used	...	...	...
33	6-28	8-28	30	7.8	469
34	5- 1	8-30	120	70.7	16,980
69	7- 8	7-14	7	1.2	16
Totals	5- 1	8-30	120	77.8	18,684

*Estimated by Division Engineer. Number acre feet used for irrigation only. 27,438 acre feet used for hydro-electric development.

CROPS IRRIGATED

Dist. No.	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens	Potatoes
30	400	....	400	10	..	10
33	164	....	191	5	10	14
34	2,375	1,175	4,800	200	..	550
69 .....	....	....	40	...	..	...
Totals	2,939	1,175	5,431	215	10	574

CROPS IRRIGATED

COST (DOLLARS)

Dist. No.	Beans	Other Crops	Total Acres Irrigated	Superintendence	Repairs	Improvements
30 .....	...	....	820	\$ 1,200	\$ 225	....
33	384		No Report
34	200	1,425	10,725	1,500	575
69	40
Totals	200	1,425	11,969	\$ 2,700	\$ 800

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